

Luminosidad transmitida por el vino

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Variables controladas:

Cepas

```
## [1] "Cabernet" "Rioja" "Syrah"
```

Años

```
## [1] "2016" "2017" "2018" "2015"
```

Tipos

```
## [1] "rosado" "tinto" "blanco"
```

Medios

```
## [1] "burbuja" "liquido"
```

Replicas

```
## [1] "1" "2" "3" "4"
```

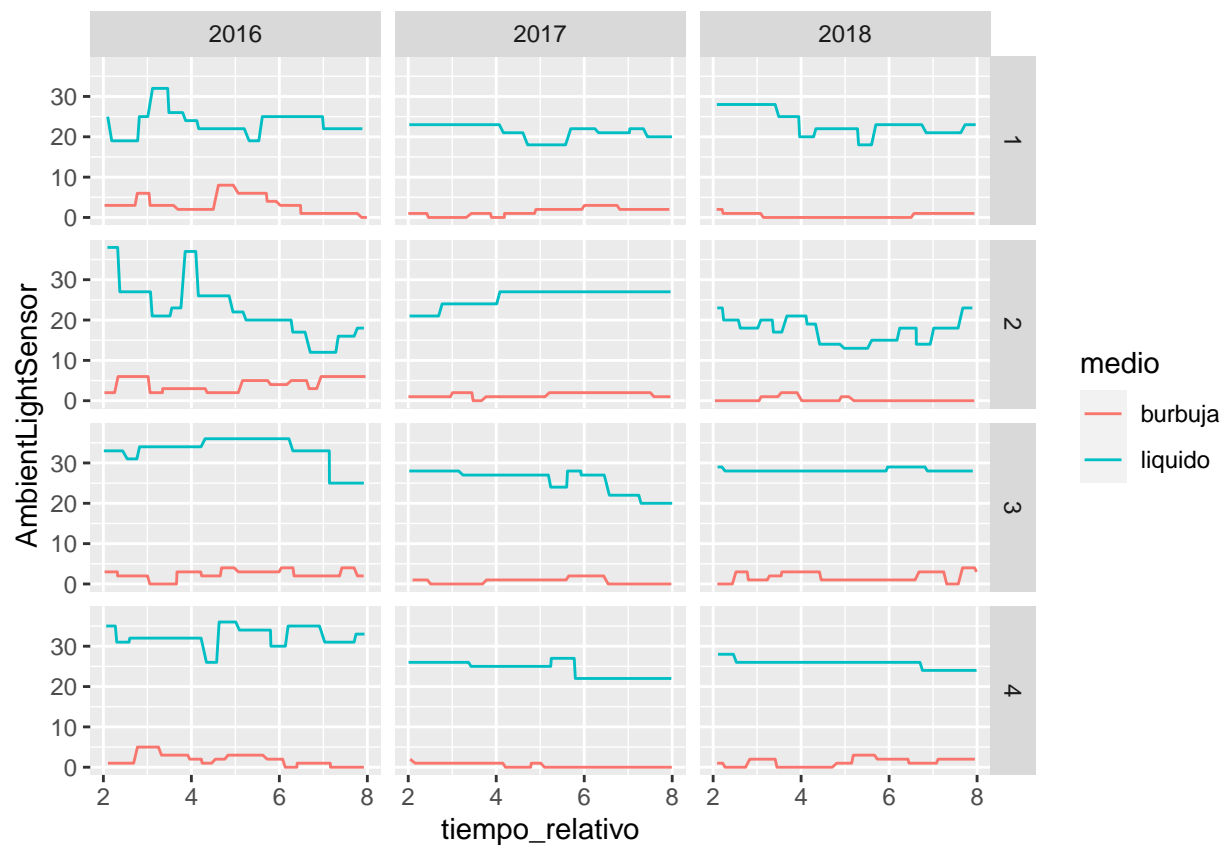
Datos completos por cepa

Syrah

Vinos tintos y rosados:

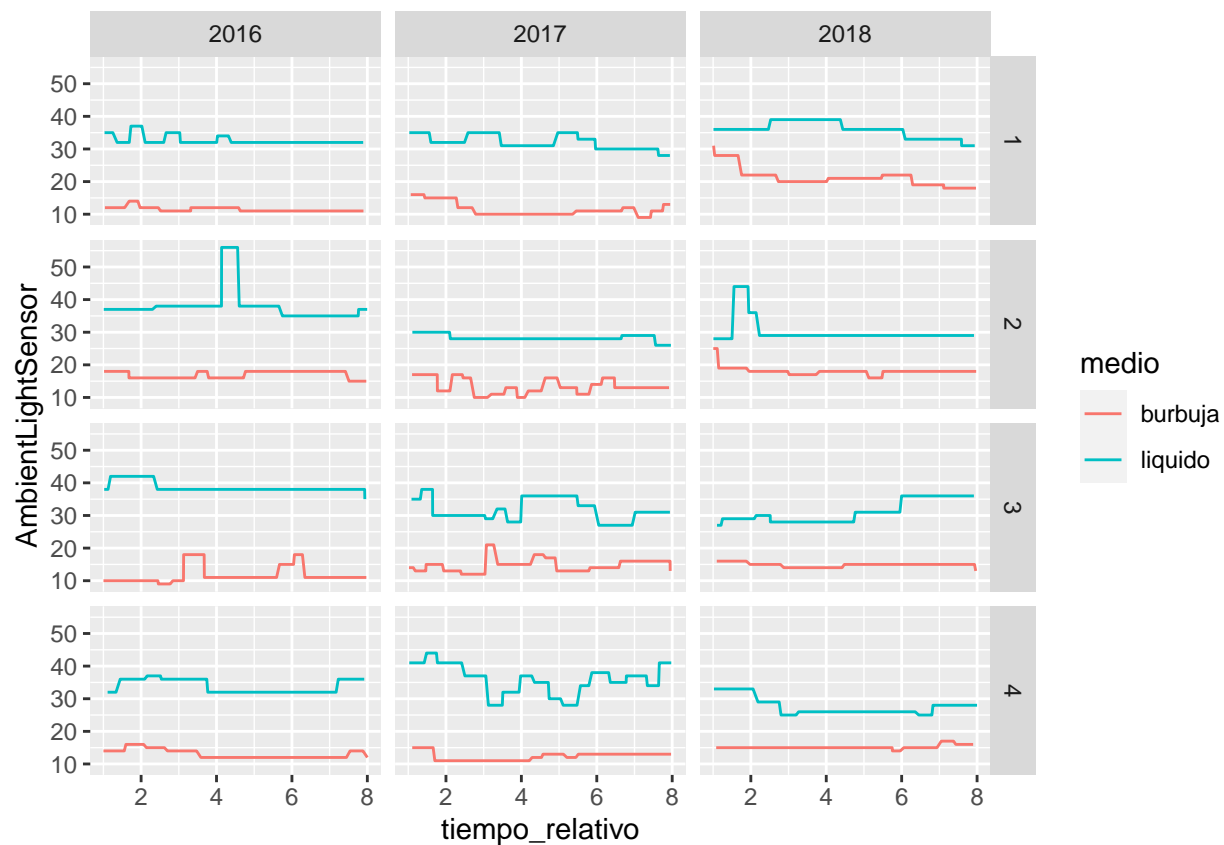
Tintos

```
## Don't know how to automatically pick scale for object of type <difftime>.  
## Defaulting to continuous.
```



Rosados

```
## Don't know how to automatically pick scale for object of type <difftime>.
## Defaulting to continuous.
```

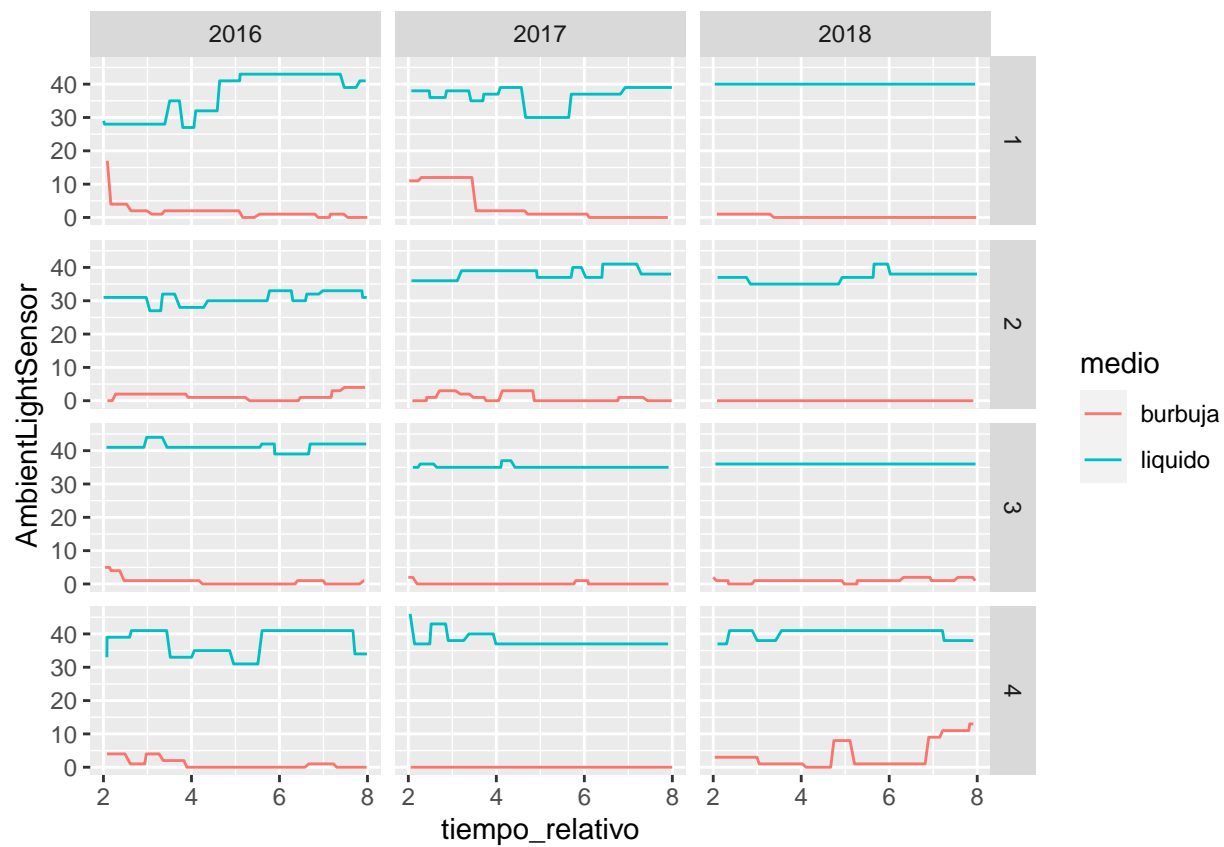


Cabernet

Vinos tintos y rosados:

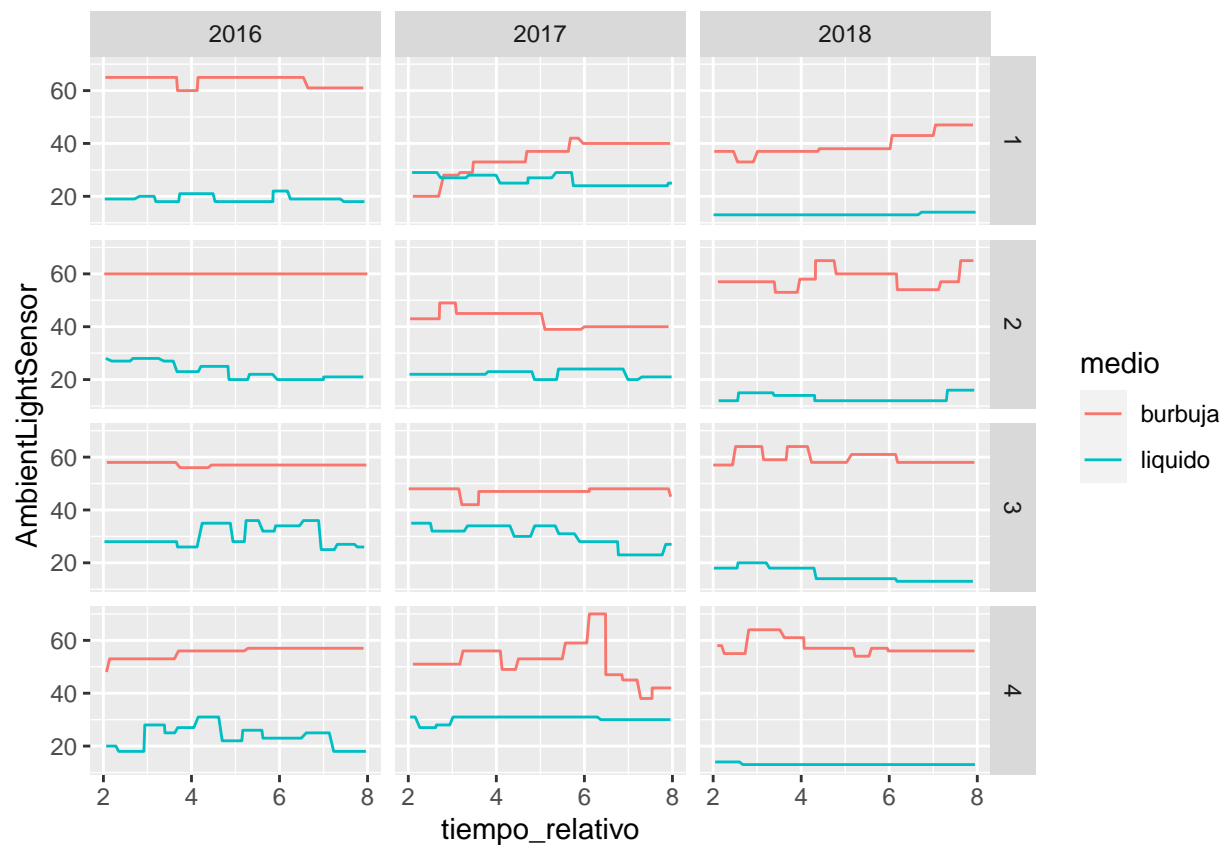
Vinos tintos:

```
## Don't know how to automatically pick scale for object of type <difftime>.
## Defaulting to continuous.
```



Rosados:

```
## Don't know how to automatically pick scale for object of type <difftime>.
## Defaulting to continuous.
```

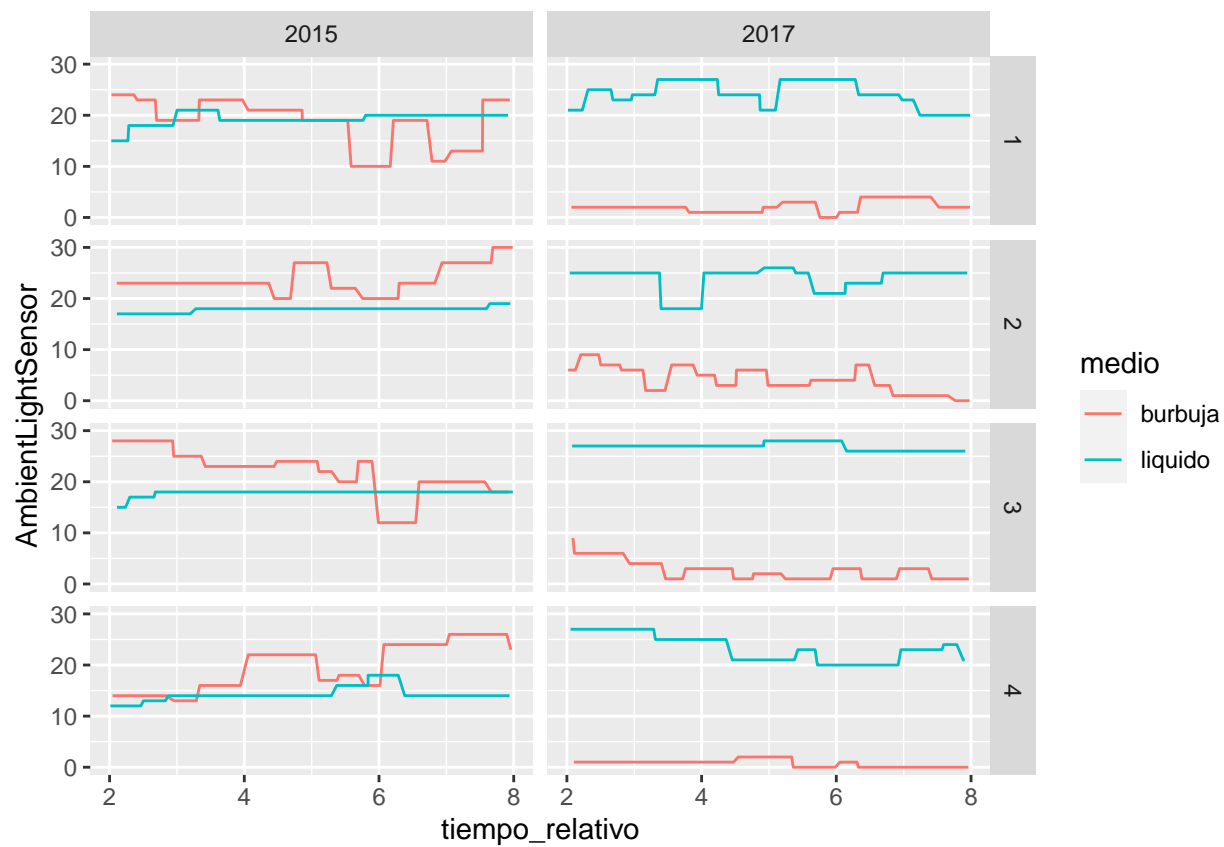


Rioja

Vinos tintos y blancos:

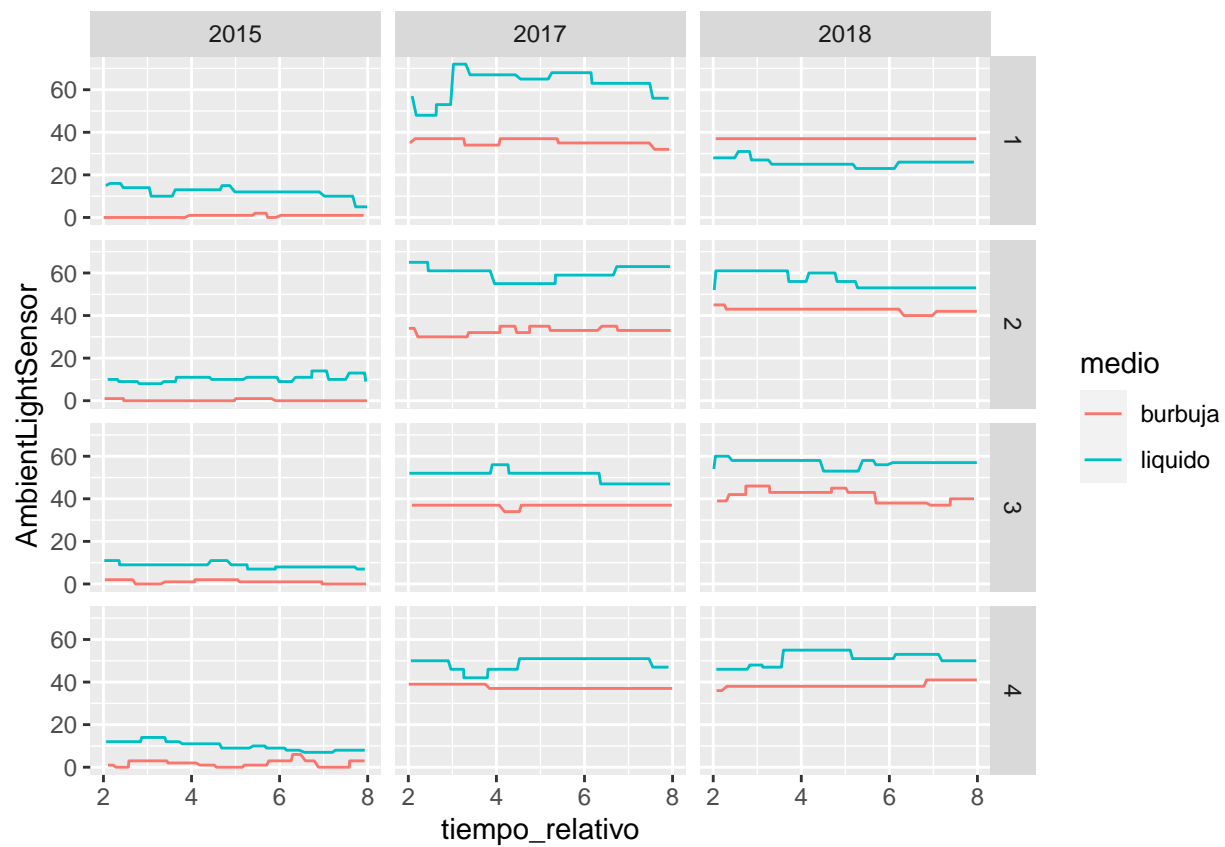
Tintos:

```
## Don't know how to automatically pick scale for object of type <difftime>.
## Defaulting to continuous.
```

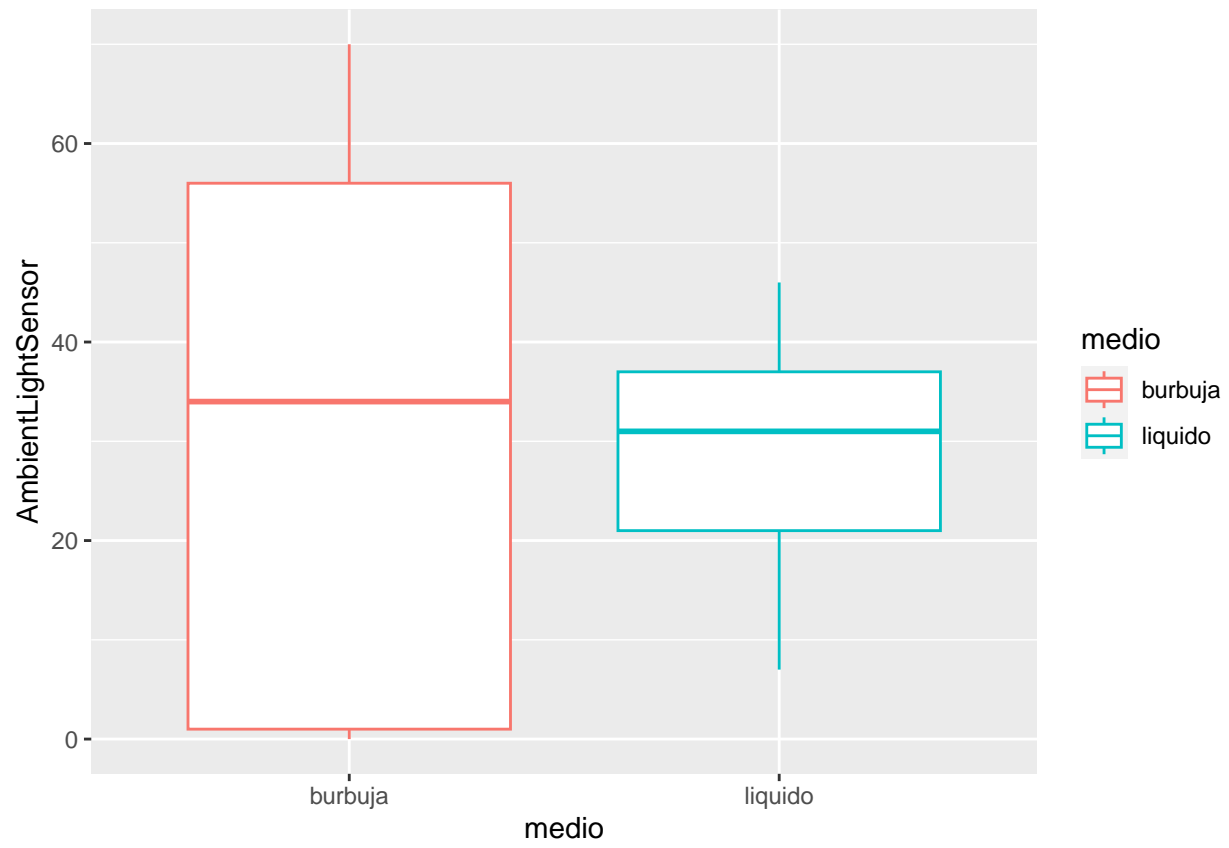


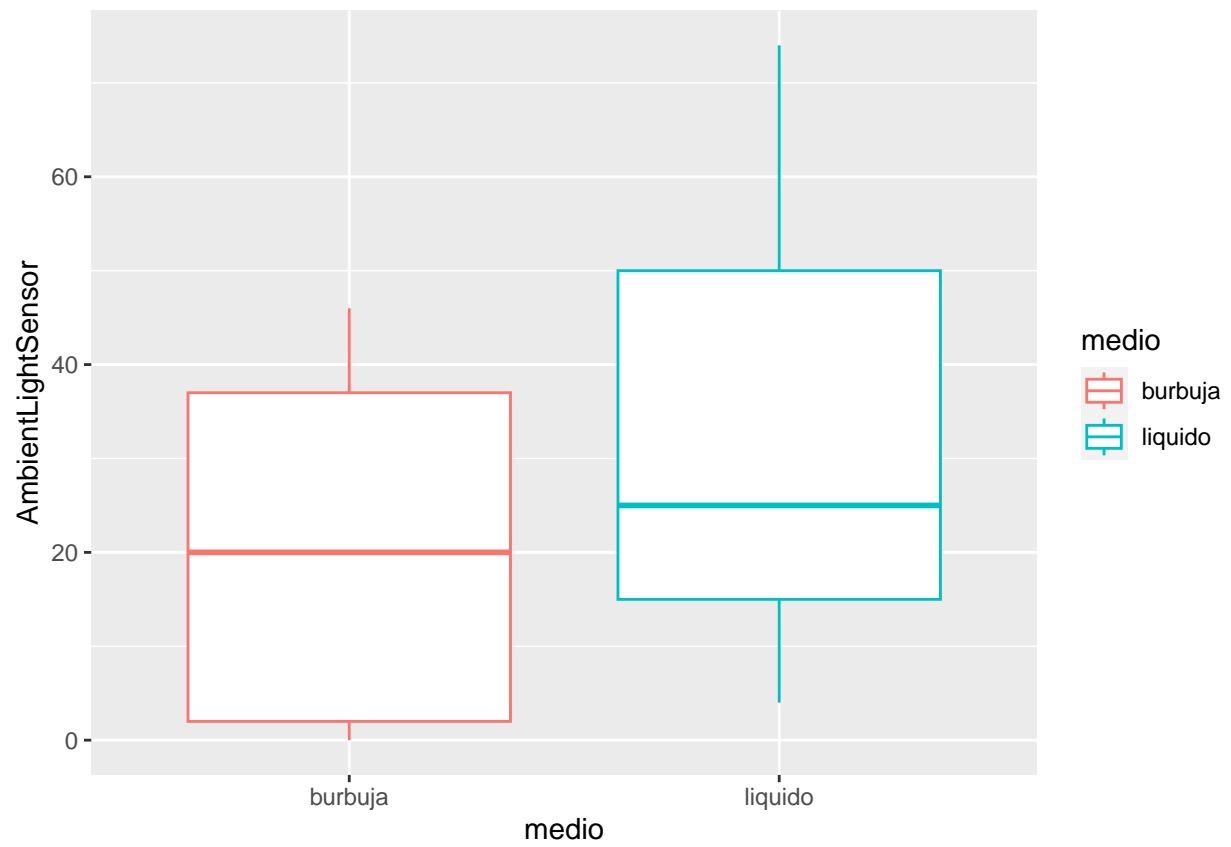
Blancos:

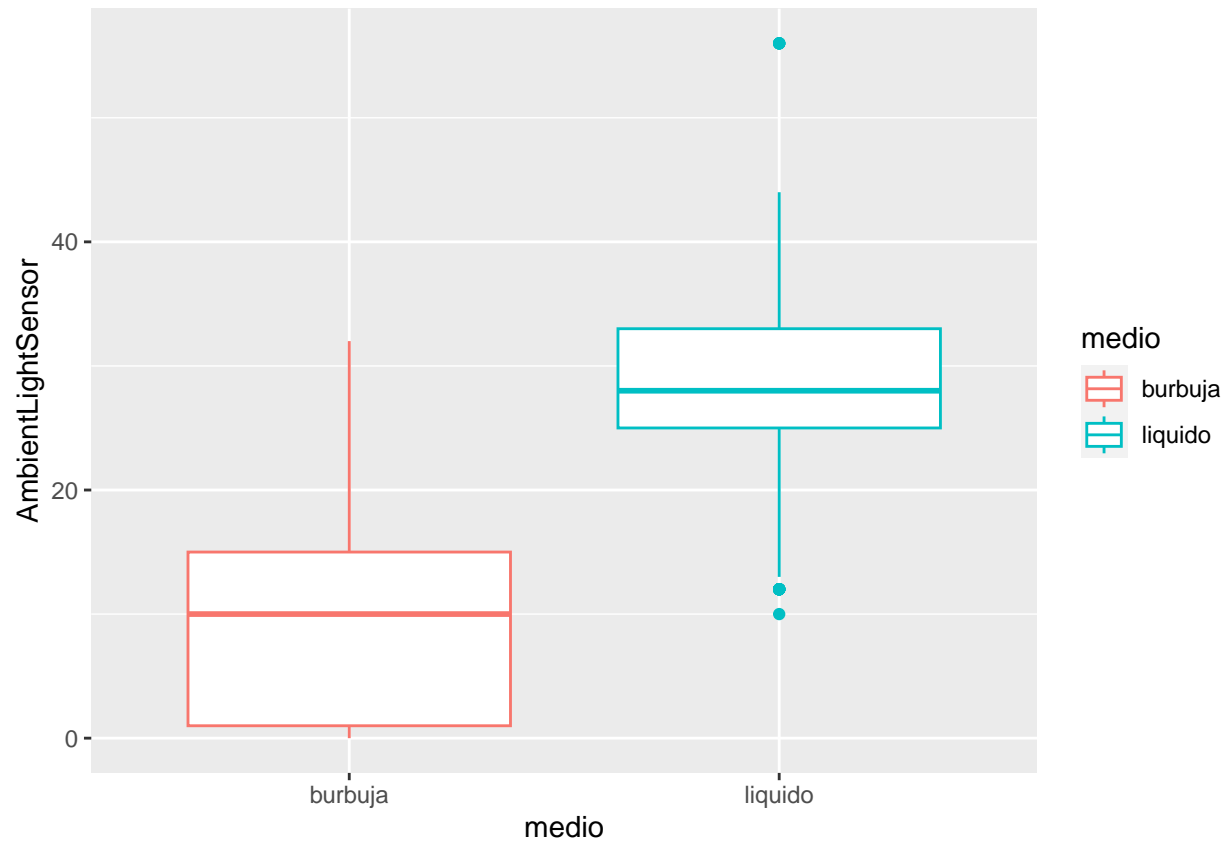
```
## Don't know how to automatically pick scale for object of type <difftime>.
## Defaulting to continuous.
```



Dispersion por cepa

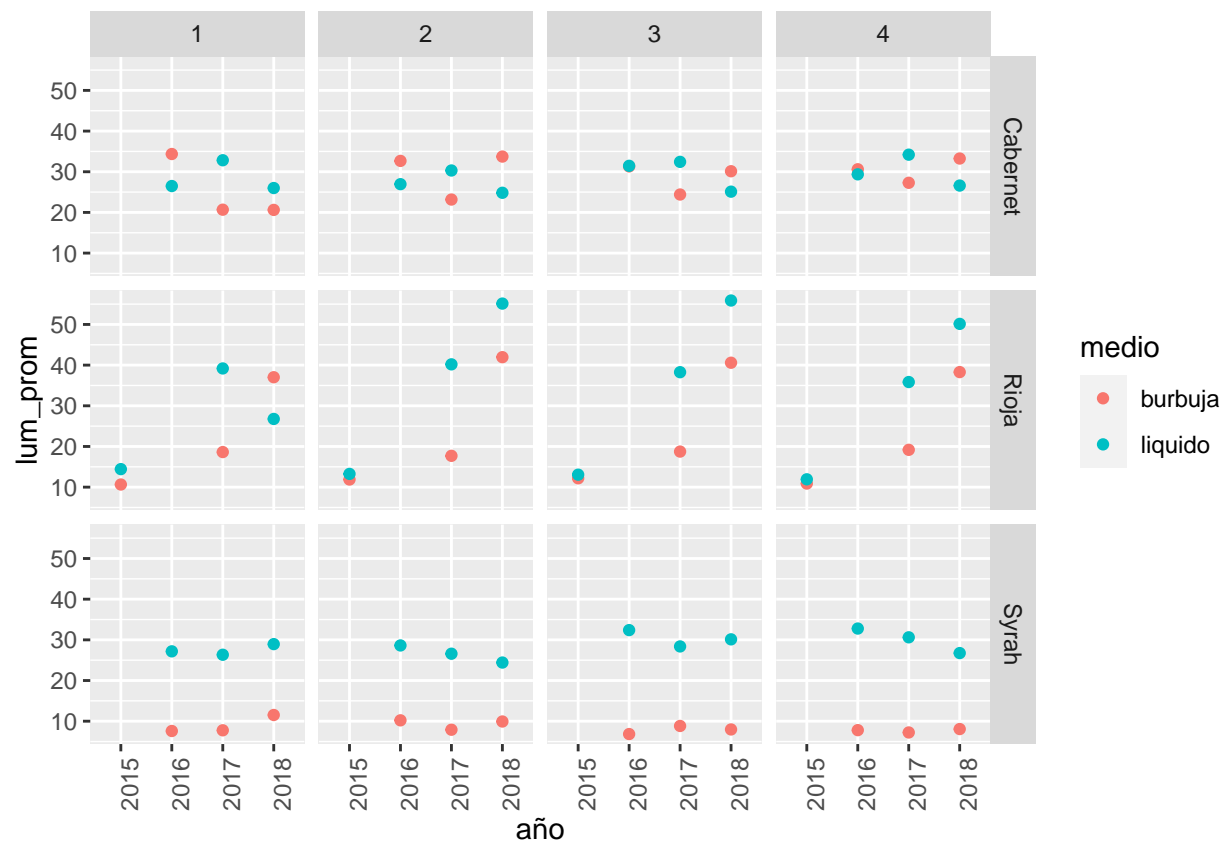






Resumen datos completos

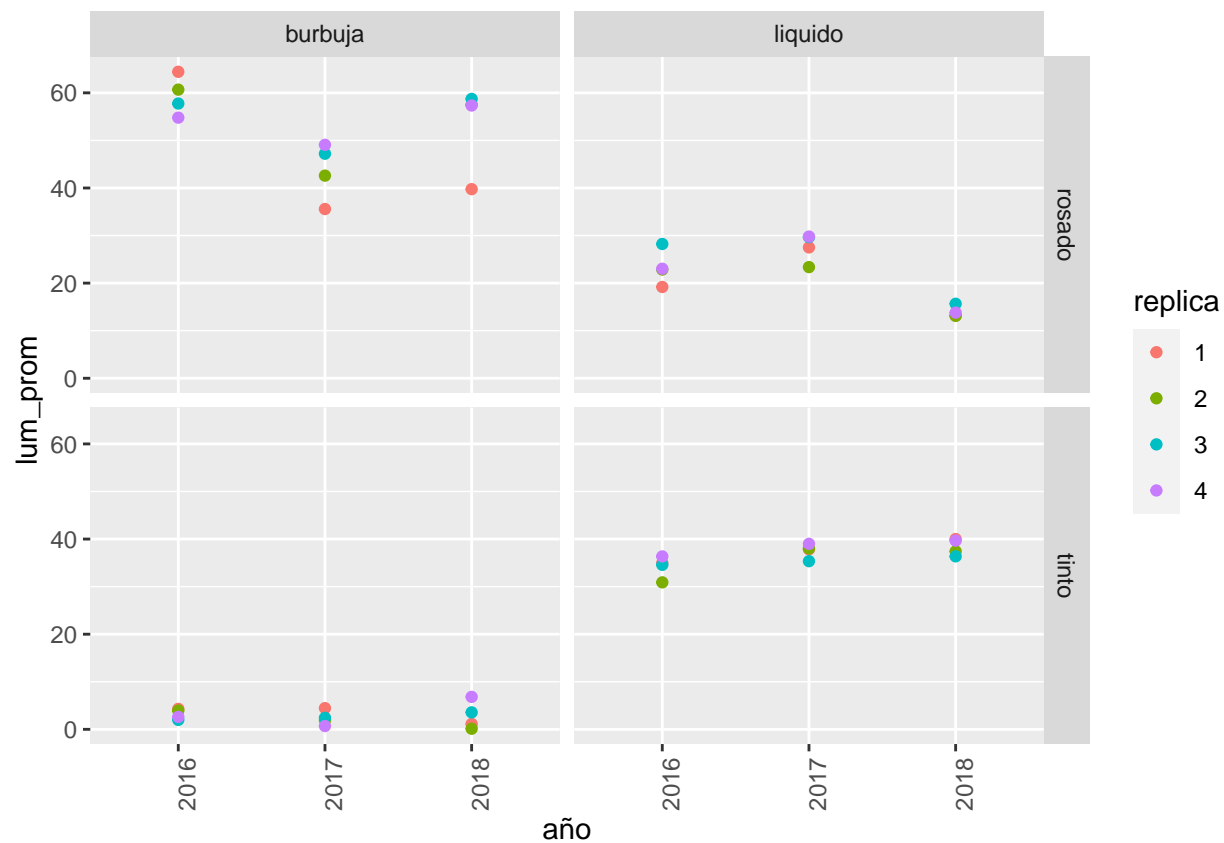
```
## 'summarise()' has grouped output by 'cepa', 'año', 'medio'. You can override  
## using the '.groups' argument.
```



Análisis por cepa (separado burbuja-liquido)

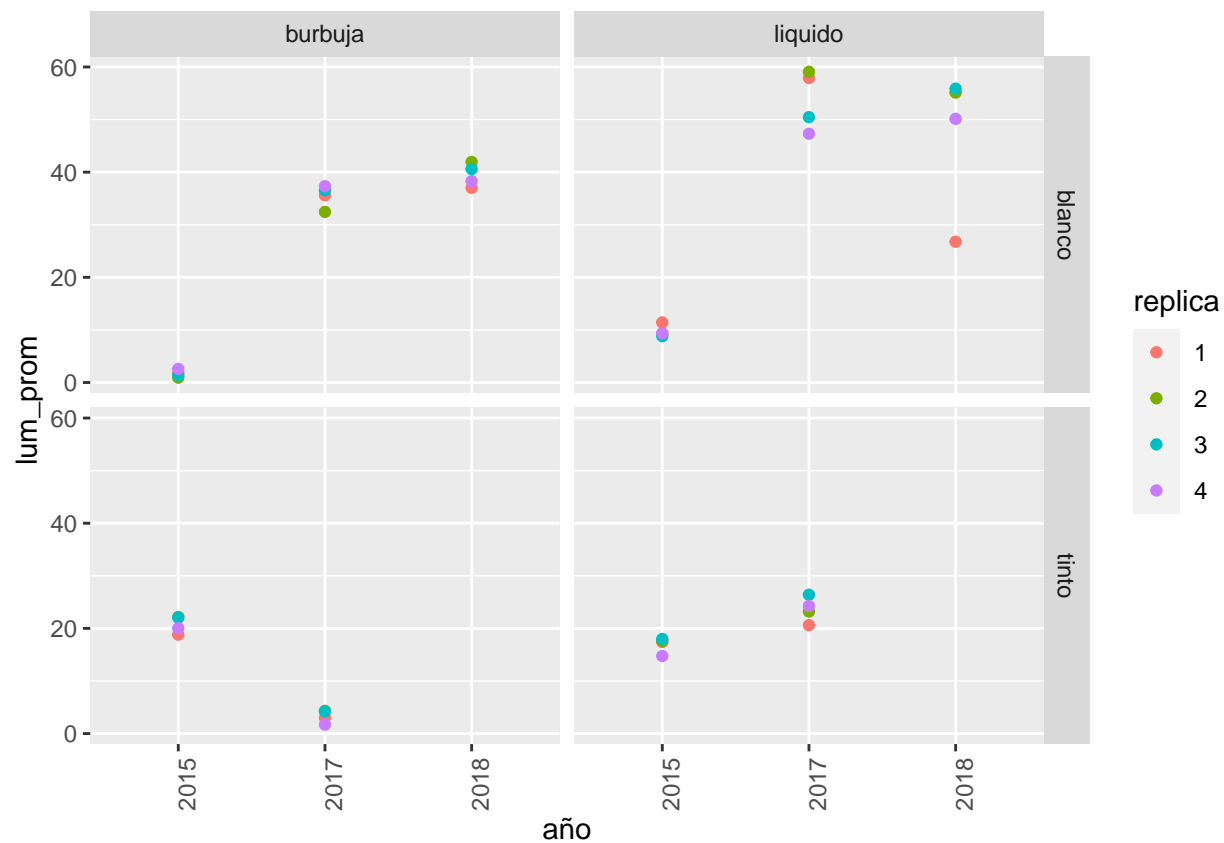
Cabernet

'summarise()' has grouped output by 'tipo', 'año', 'medio'. You can override
using the '.groups' argument.



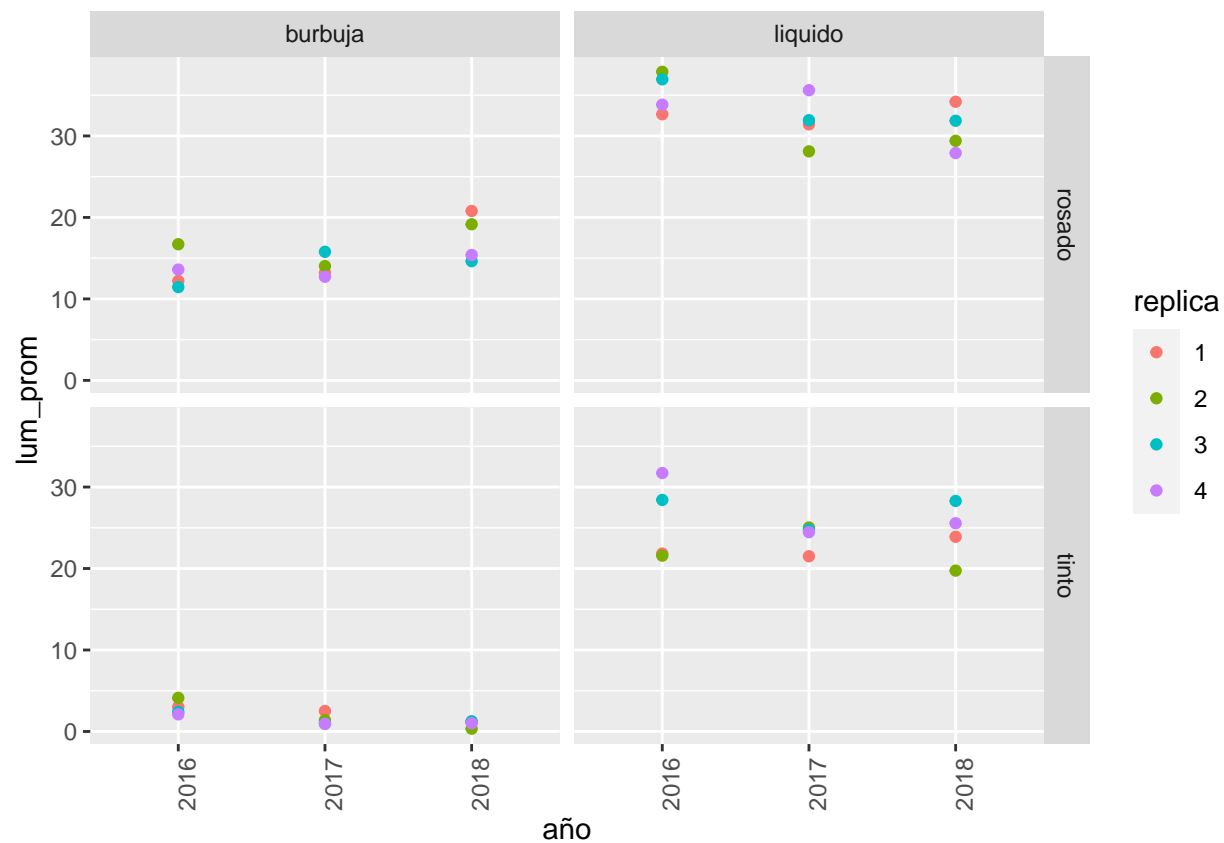
Rioja

'summarise()' has grouped output by 'cepa', 'tipo', 'año', 'medio'. You can
override using the '.groups' argument.



Syrah

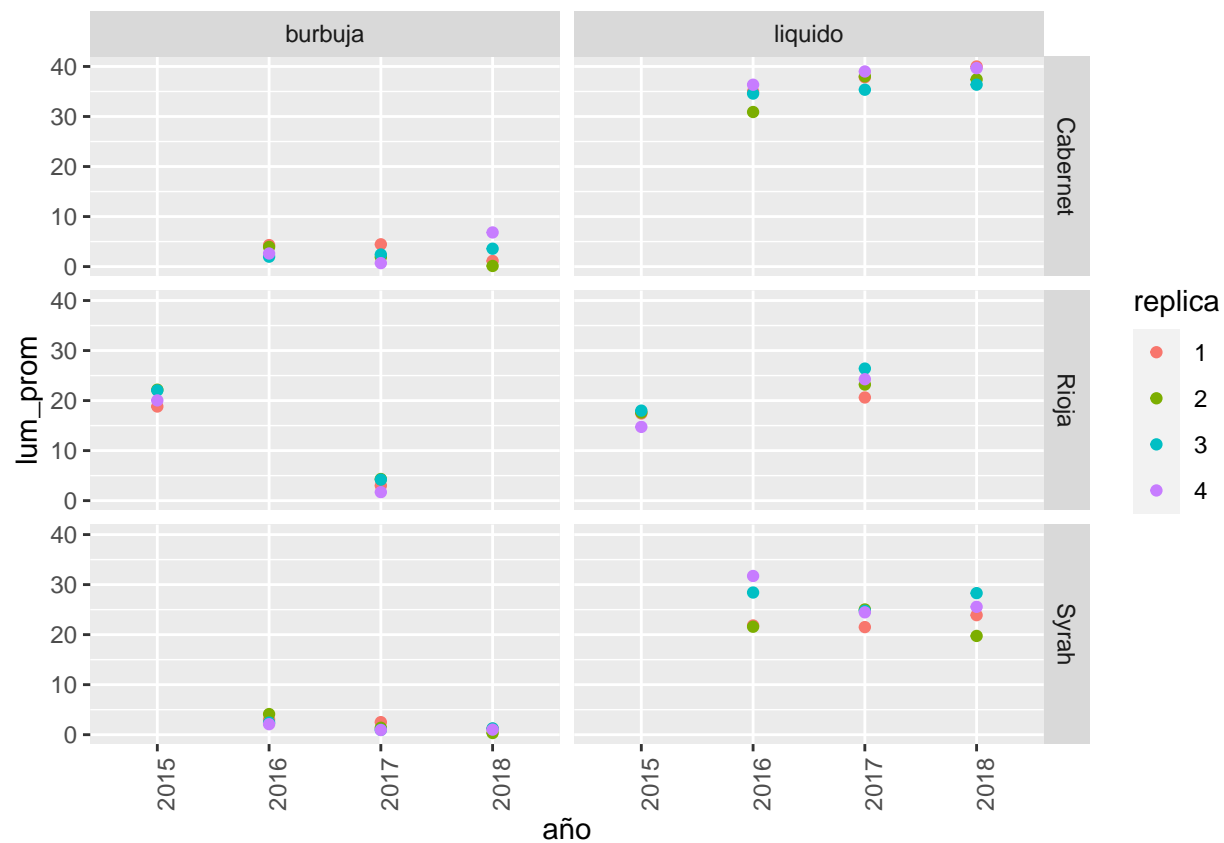
'summarise()' has grouped output by 'cepa', 'tipo', 'año', 'medio'. You can
override using the '.groups' argument.



Analisis por tipos

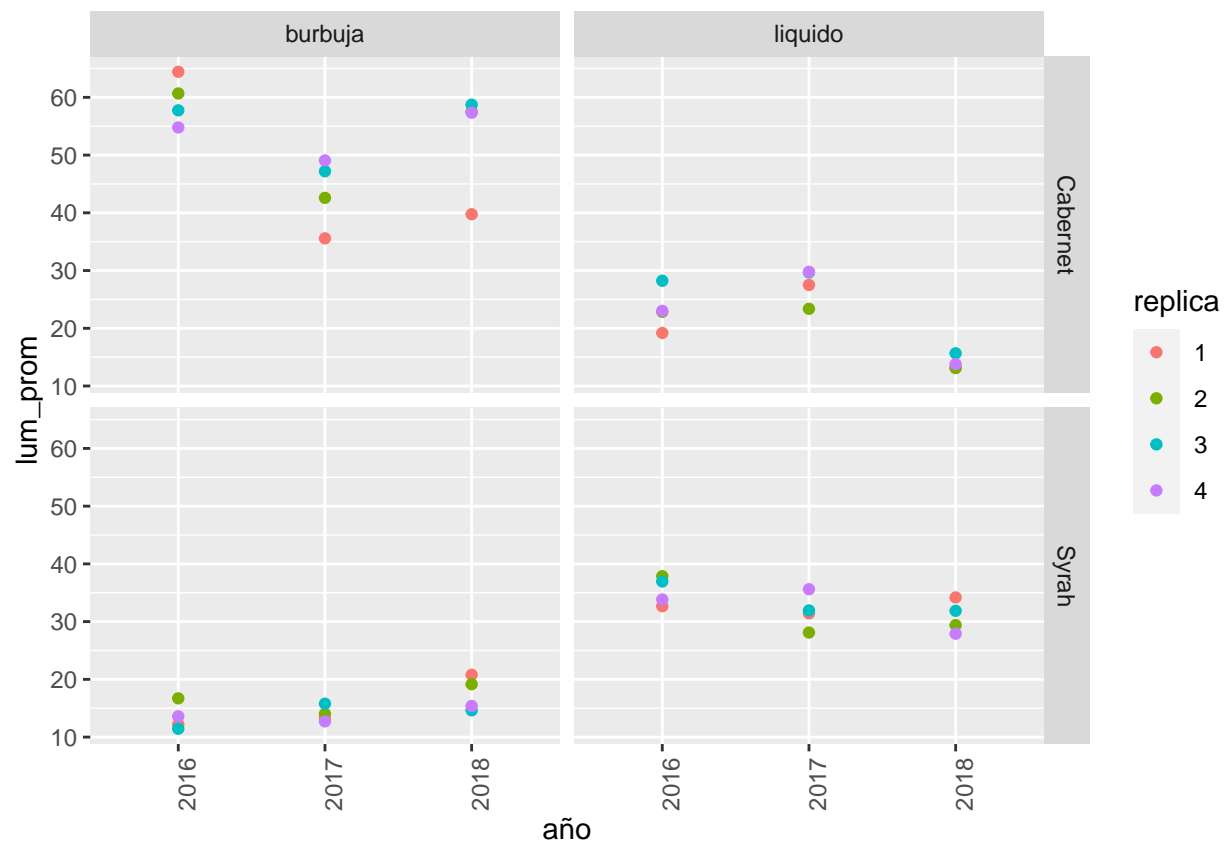
Tinto

'summarise()' has grouped output by 'cepa', 'año', 'medio'. You can override
using the '.groups' argument.



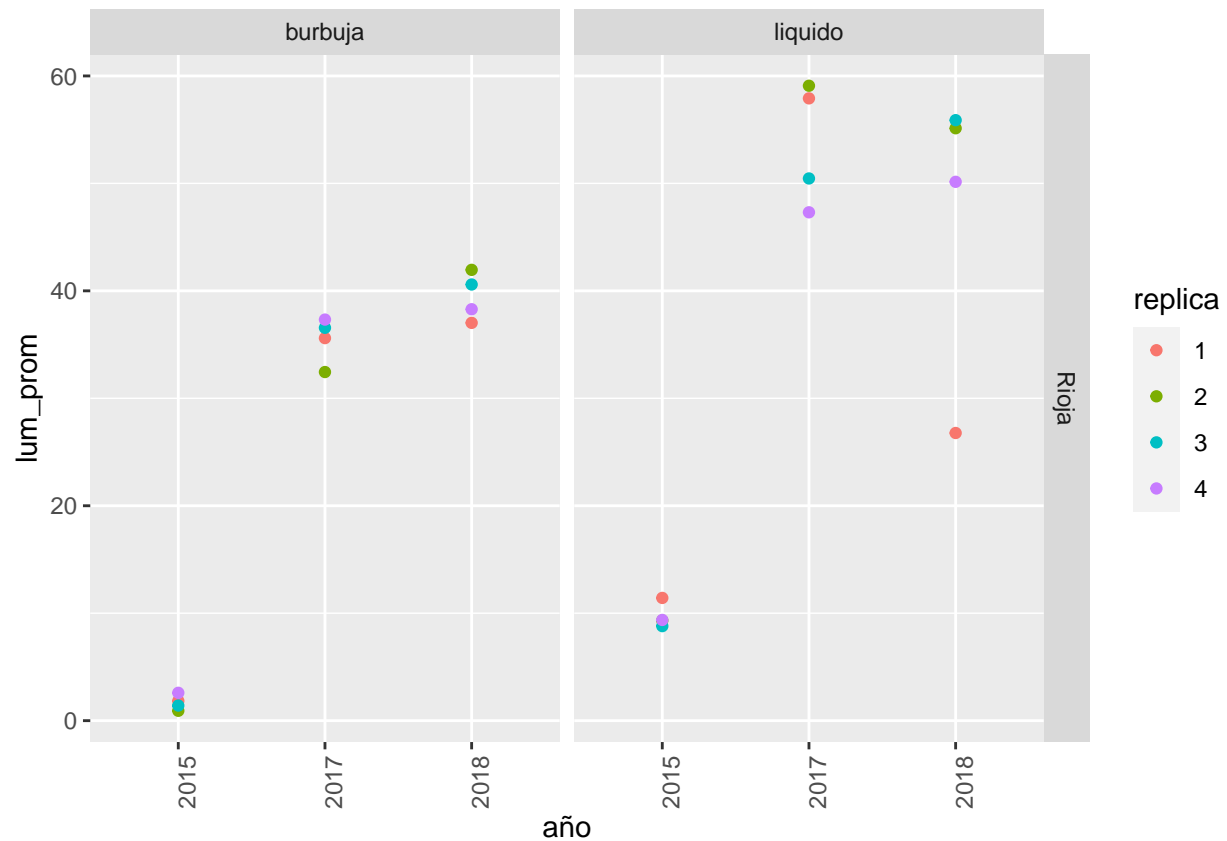
Rosado

'summarise()' has grouped output by 'cepa', 'año', 'medio'. You can override
using the '.groups' argument.



Blanco

'summarise()' has grouped output by 'cepa', 'año', 'medio'. You can override
using the '.groups' argument.



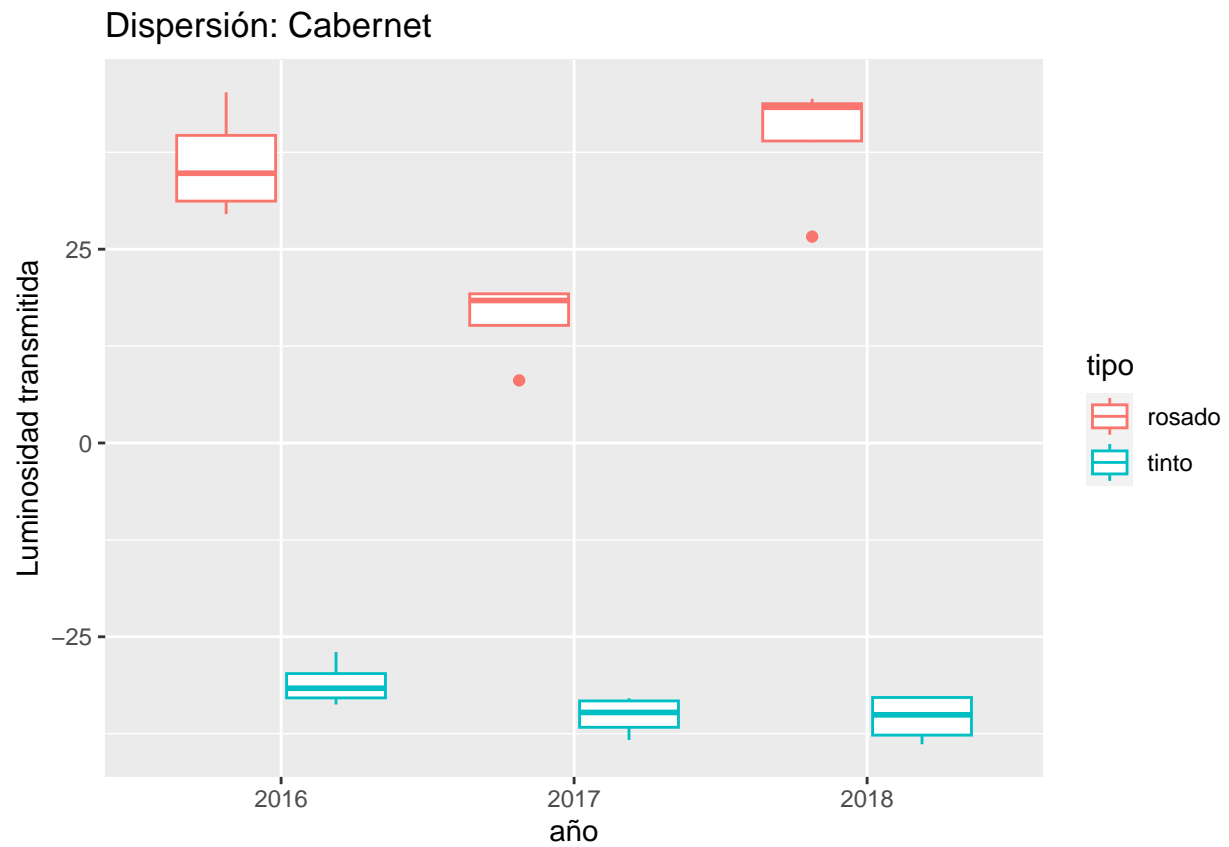
Análisis luminosidad de solo vino (liquido-burbuja)

'summarise()' has grouped output by 'tipo', 'cepa', 'año'. You can override
using the '.groups' argument.

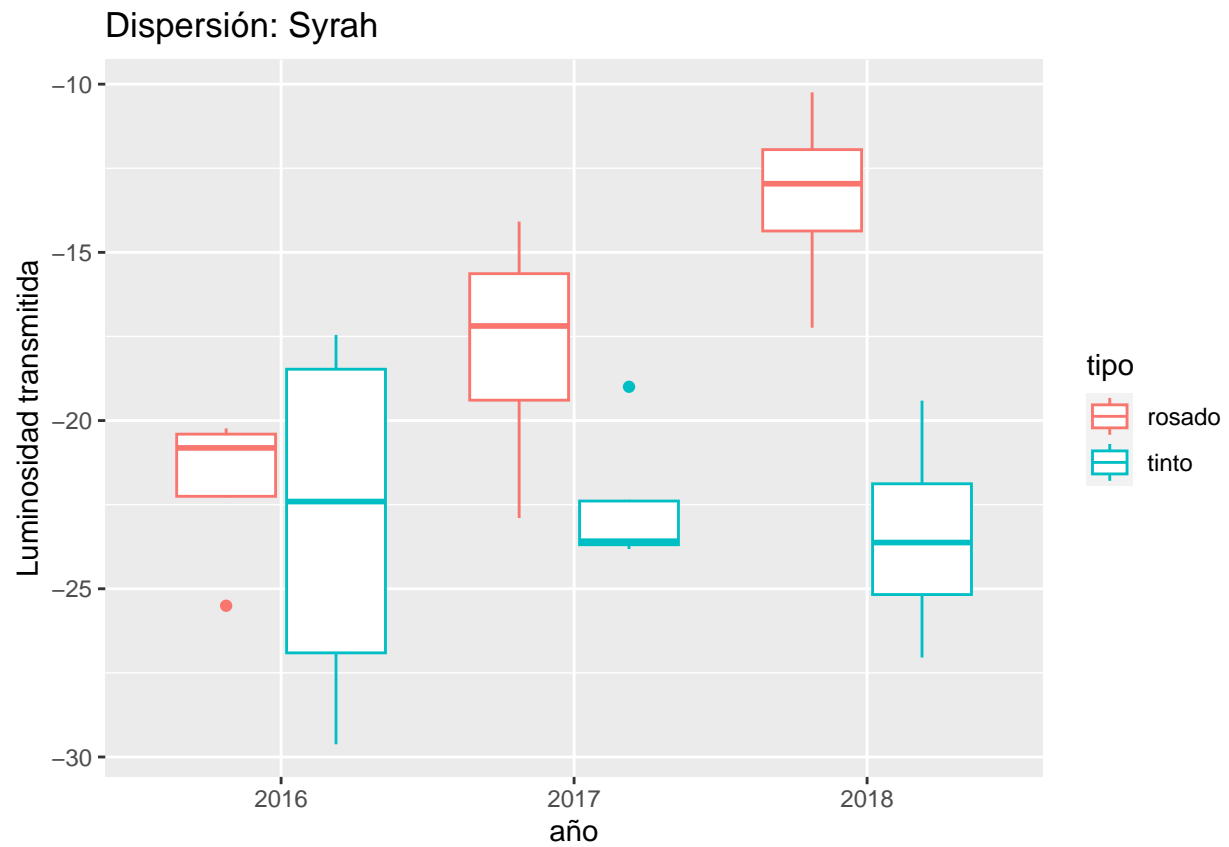
'summarise()' has grouped output by 'tipo', 'cepa', 'año'. You can override
using the '.groups' argument.

Joining with 'by = join_by(tipo, cepa, año, replica)'

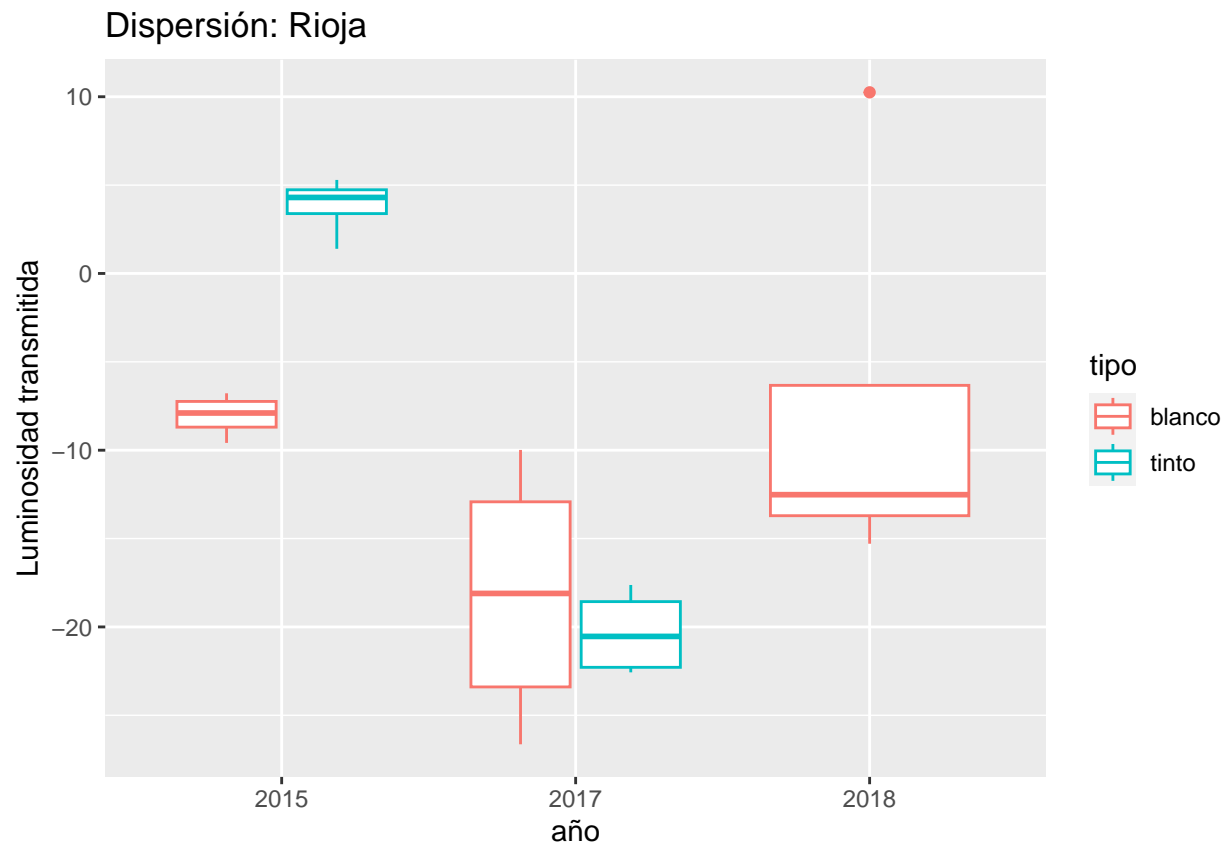
```
ab %>%
  filter(cepa=="Cabernet") %>%
  ggplot(aes(año, lum_trans_vino,col=tipo)) +
  geom_boxplot()+
  ggtitle("Dispersión: Cabernet") + ylab("Luminosidad transmitida")
```



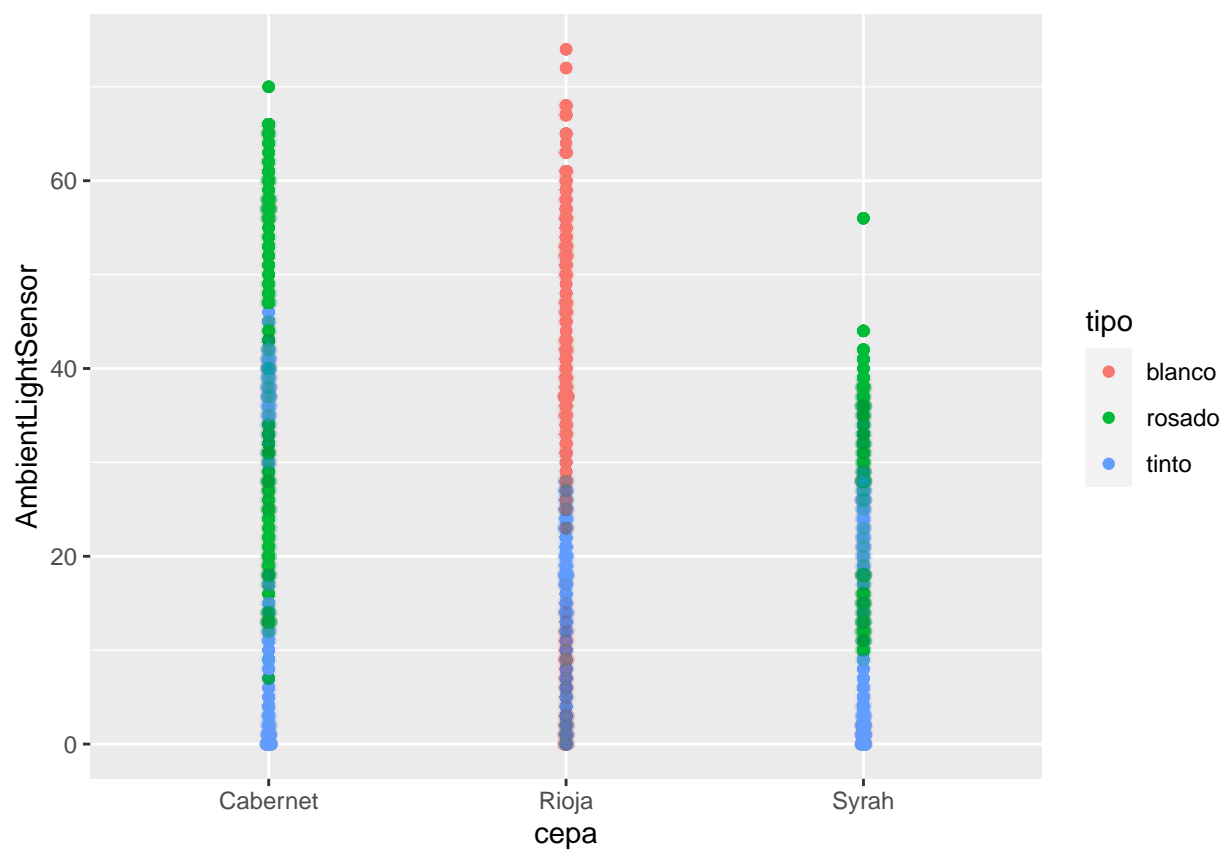
```
ab %>%
  filter(cepa=="Syrah") %>%
  ggplot(aes(año, lum_trans_vino,col=tipo)) +
  geom_boxplot()+
  ggtitle("Dispersión: Syrah") + ylab("Luminosidad transmitida")
```



```
ab %>%  
  filter(cepa=="Rioja") %>%  
  ggplot(aes(año, lum_trans_vino,col=tipo)) +  
  geom_boxplot()+  
  ggtitle("Dispersión: Rioja") + ylab("Luminosidad transmitida")
```

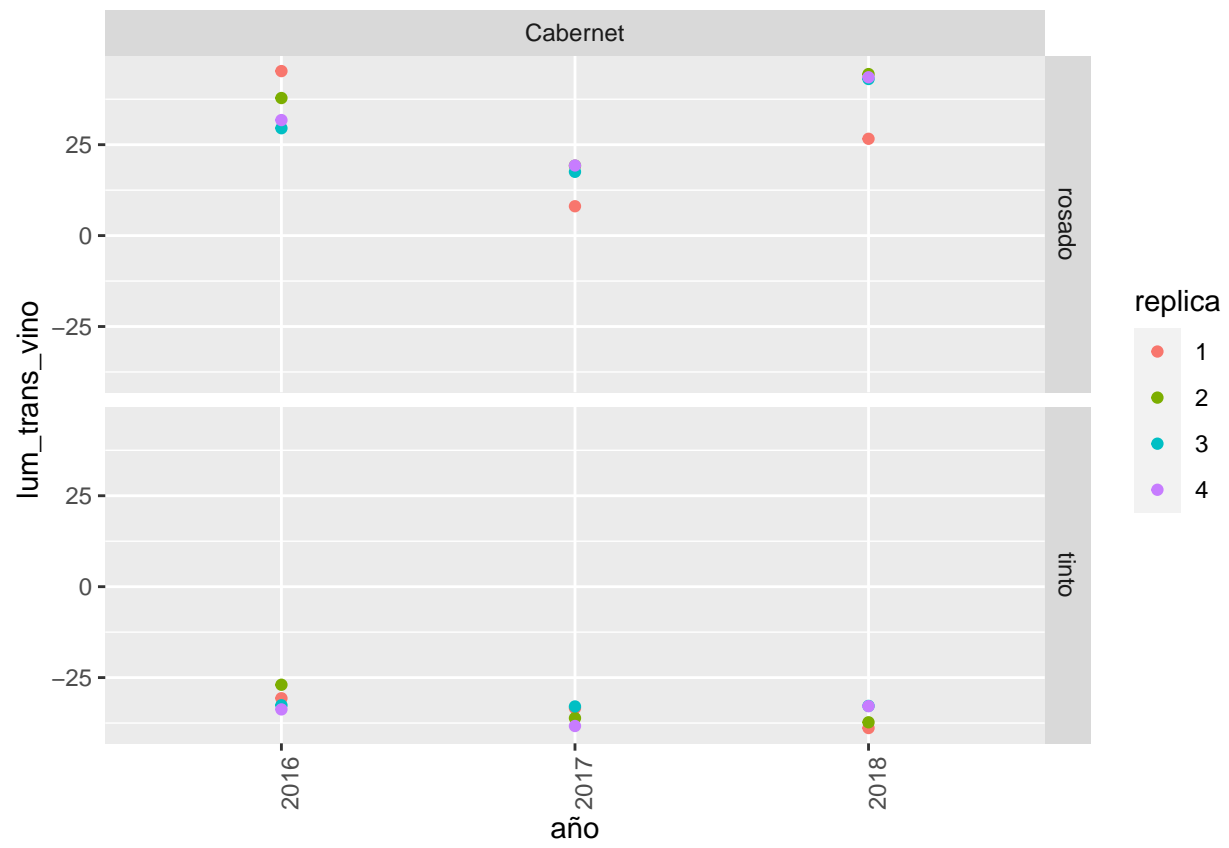


Completo

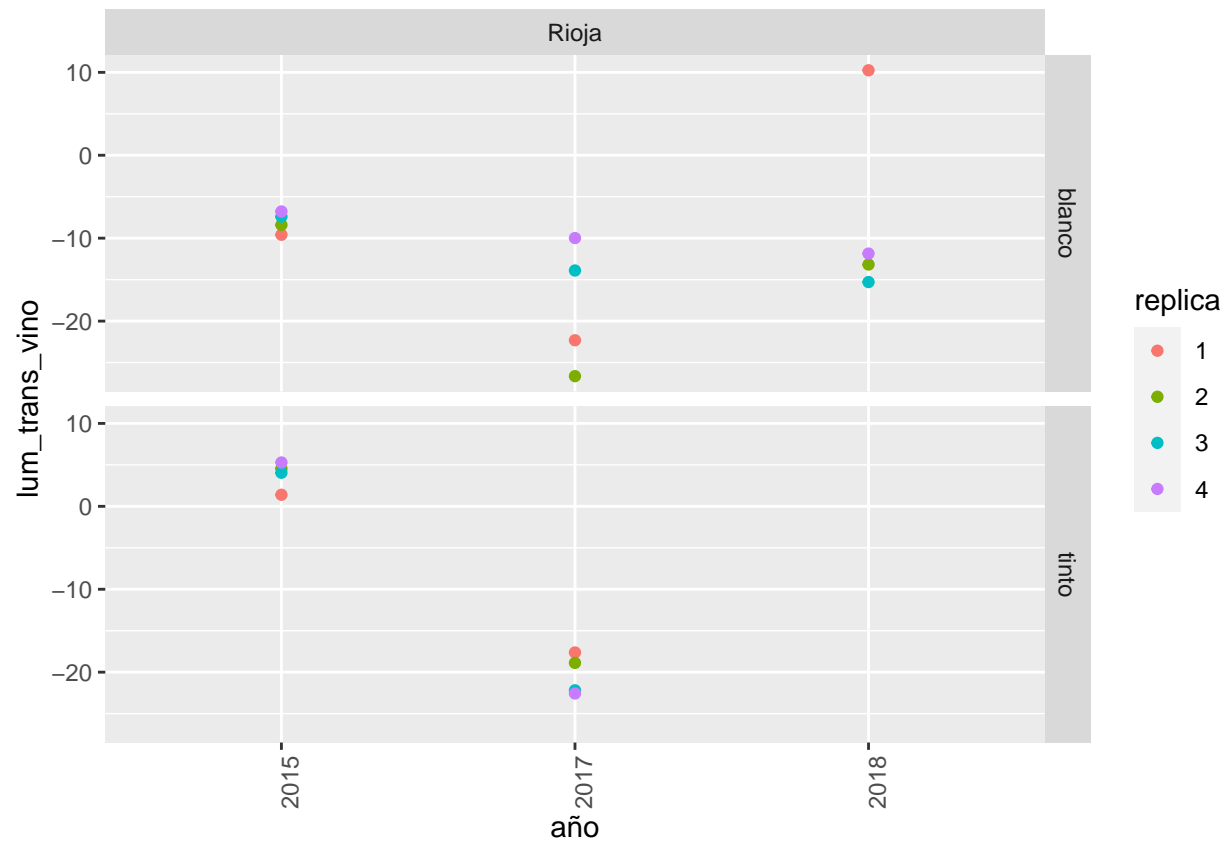


Por cepa:

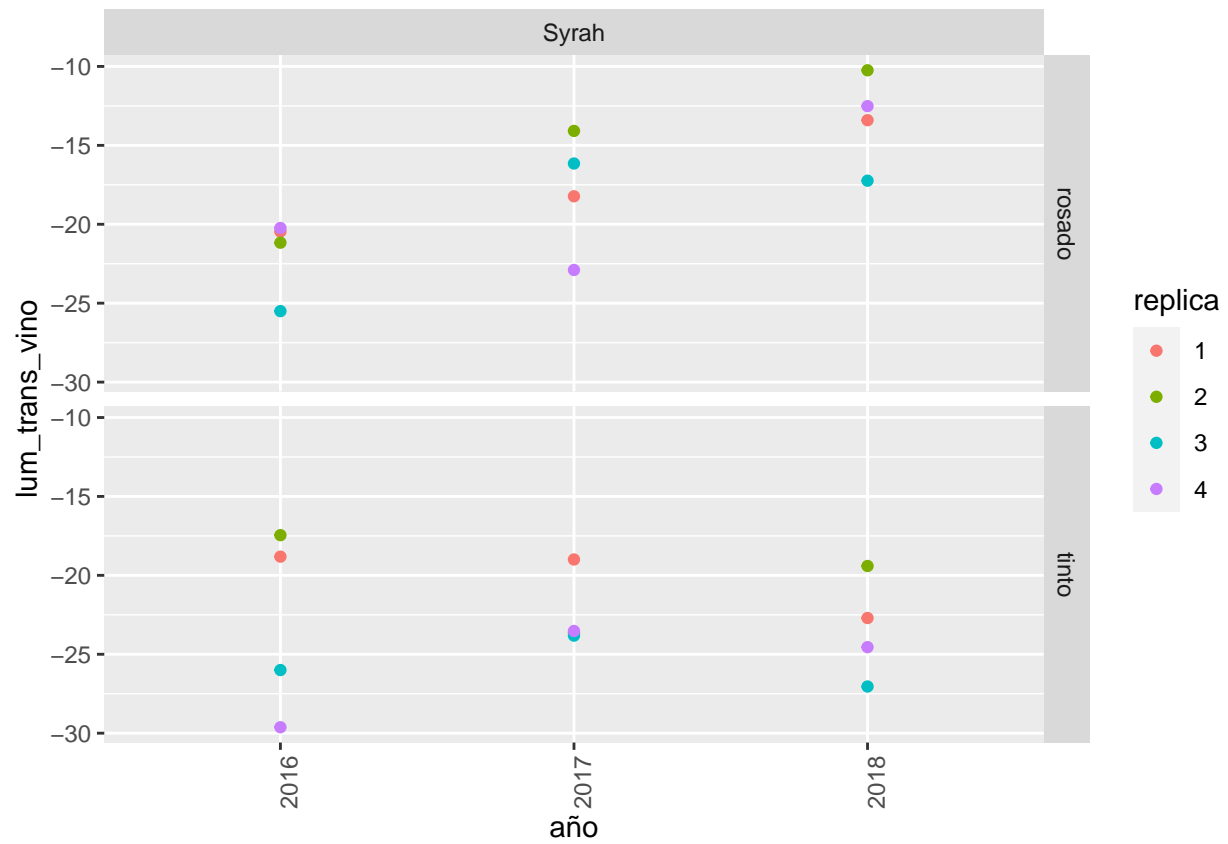
Cabernet



Rioja

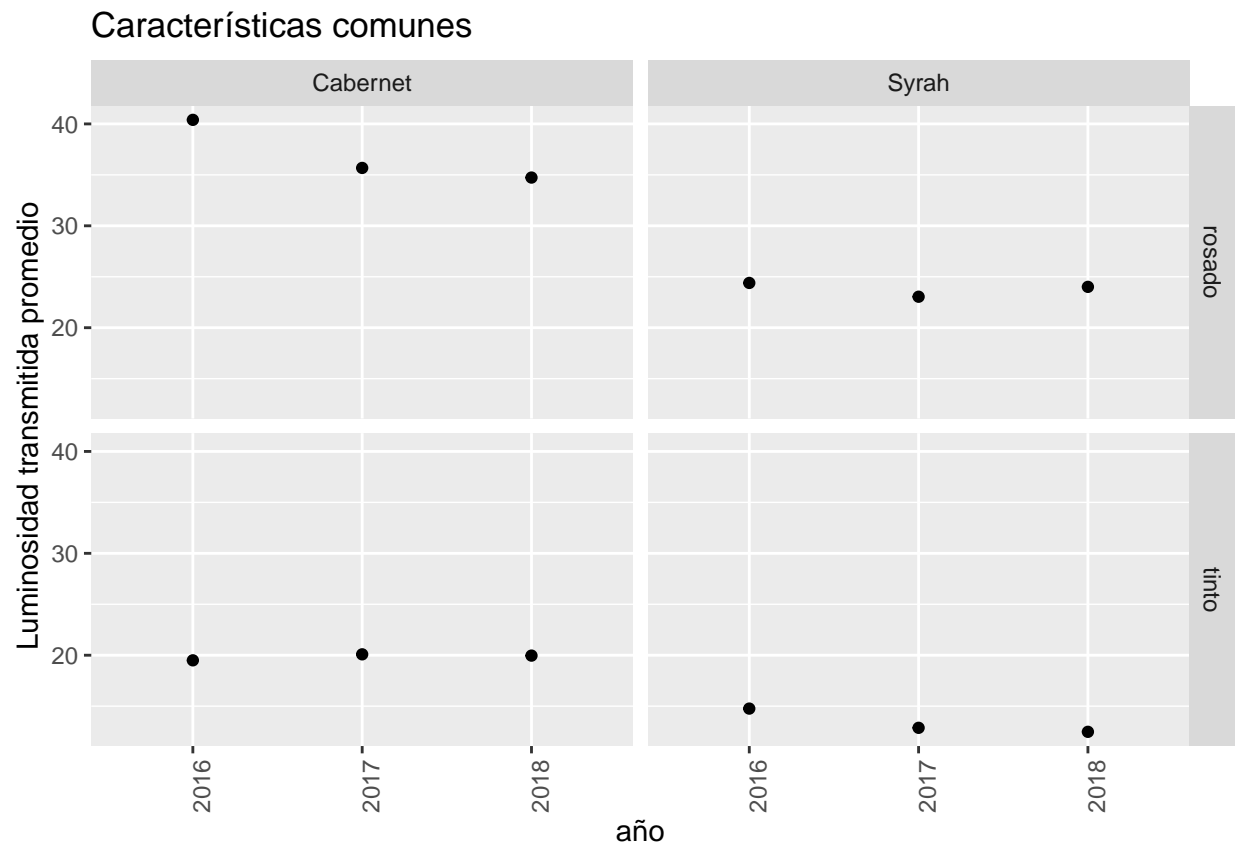


Syrah

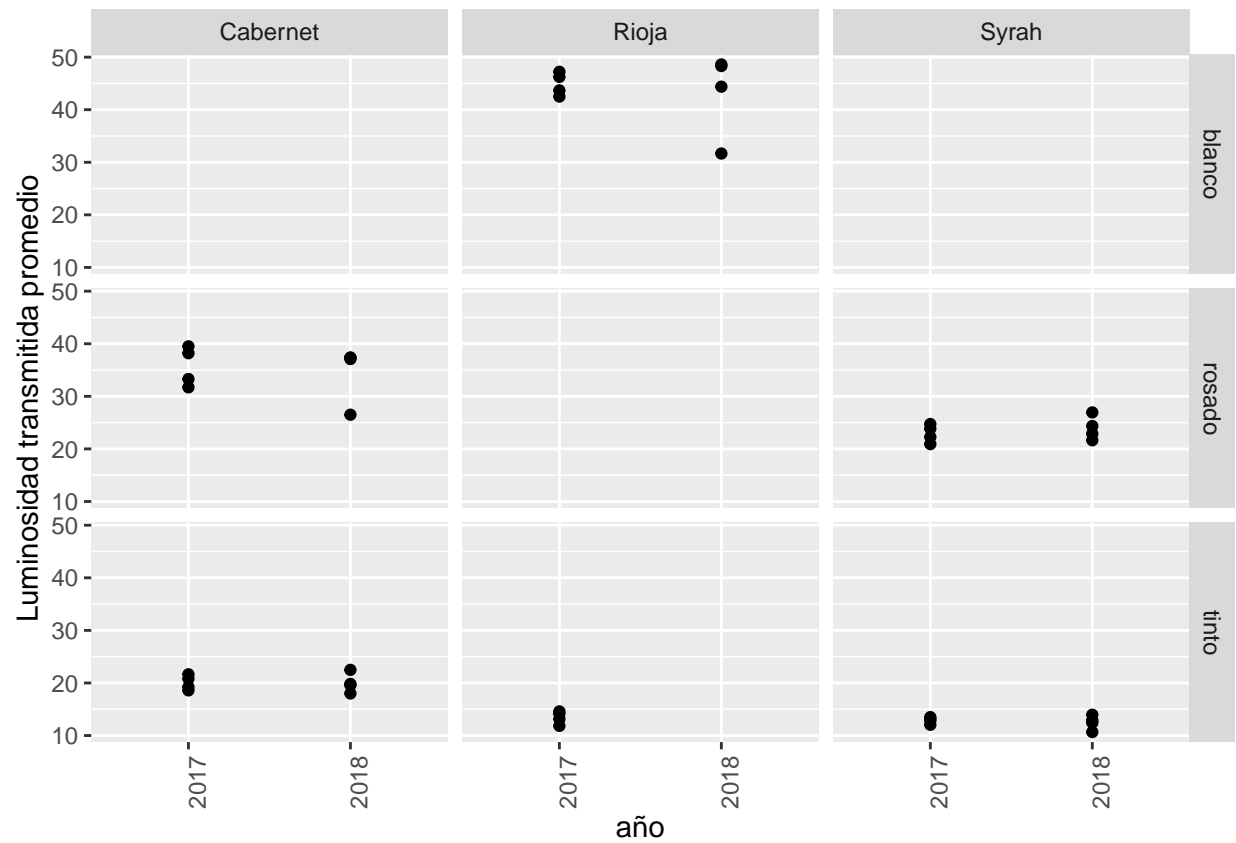


Análisis tipo

```
## 'summarise()' has grouped output by 'cepa', 'año'. You can override using the  
## '.groups' argument.
```

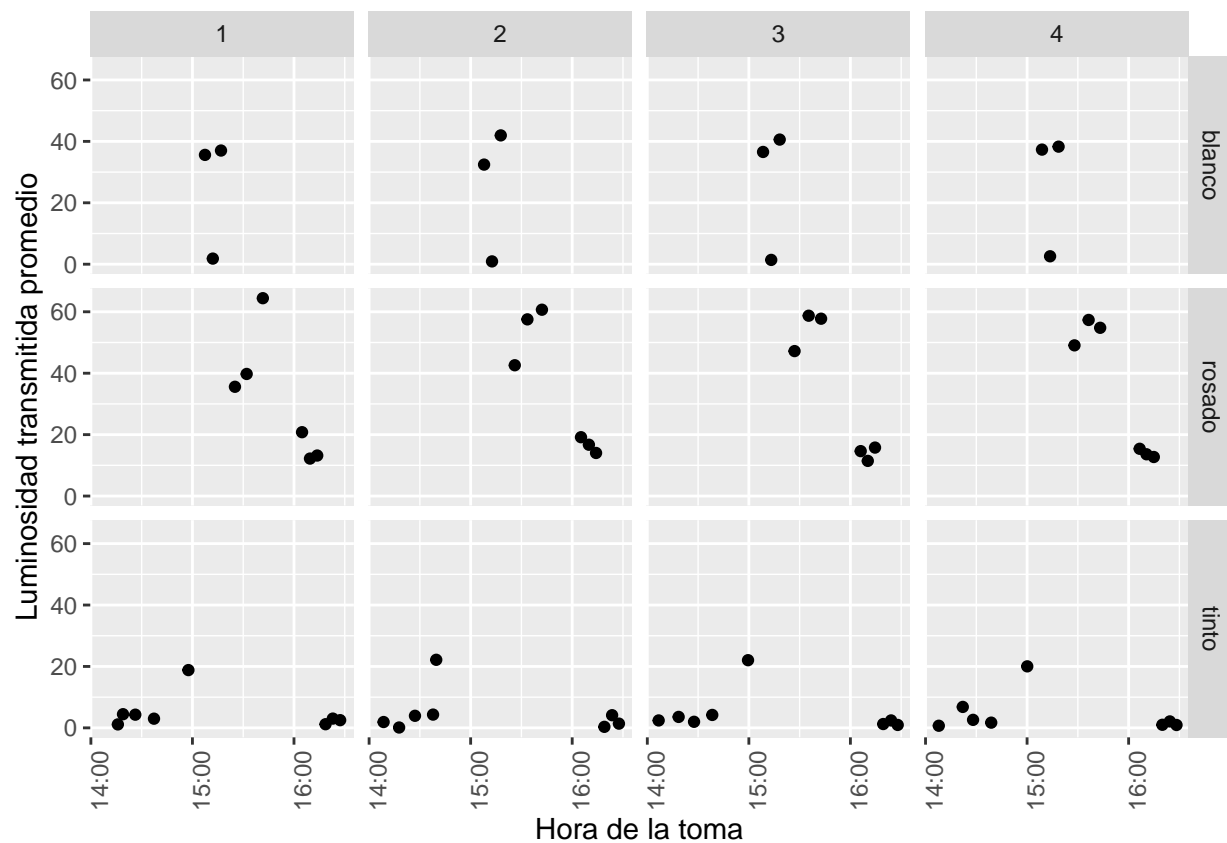



```
## 'summarise()' has grouped output by 'cepa', 'año', 'tipo'. You can override  
## using the '.groups' argument.
```

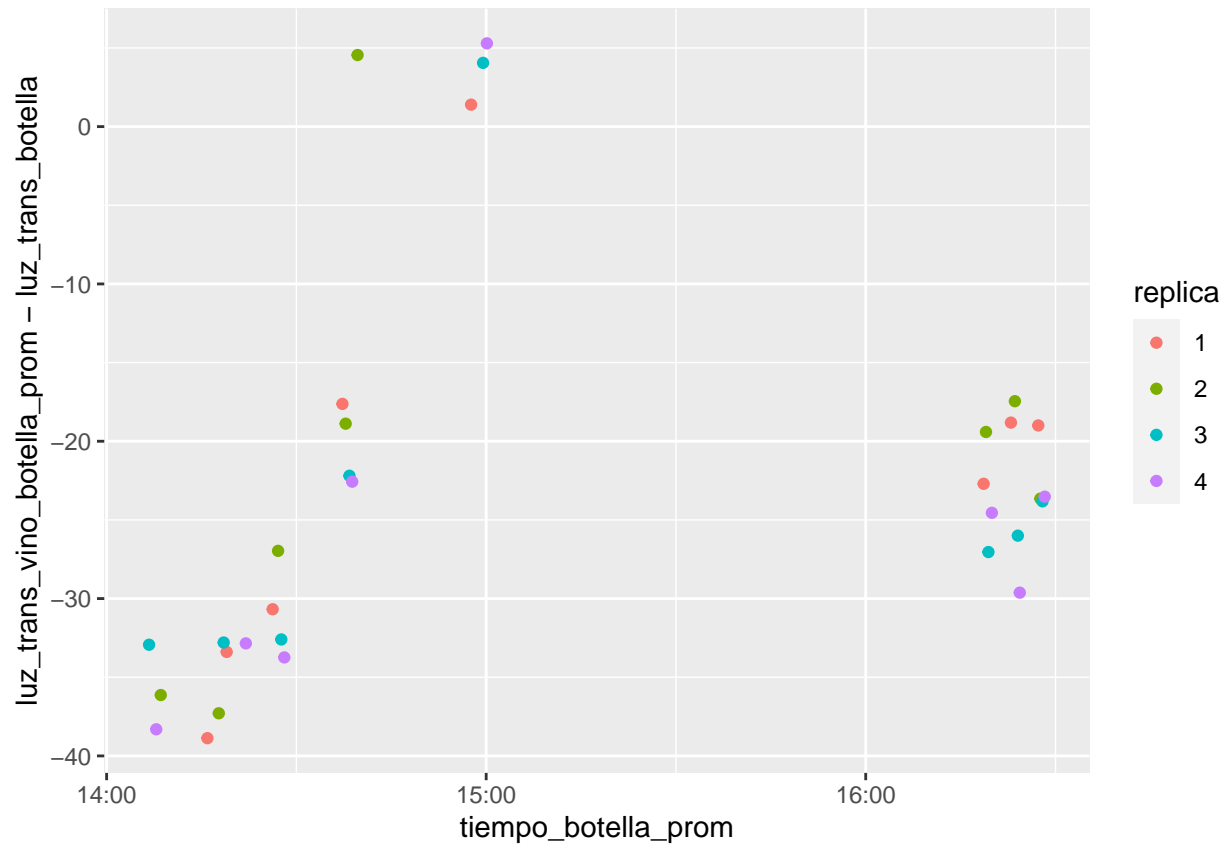


Análisis fátiga del instrumento

```
ab %>%
  ggplot(aes(tiempo_botella_prom,luz_trans_vino_botella_prom)) +
  geom_point() +
  facet_grid(tipo ~ replica) +
  theme(axis.text.x = element_text(angle = 90, hjust = 1))+
  ylab("Luminosidad transmitida promedio")+xlab("Hora de la toma")
```



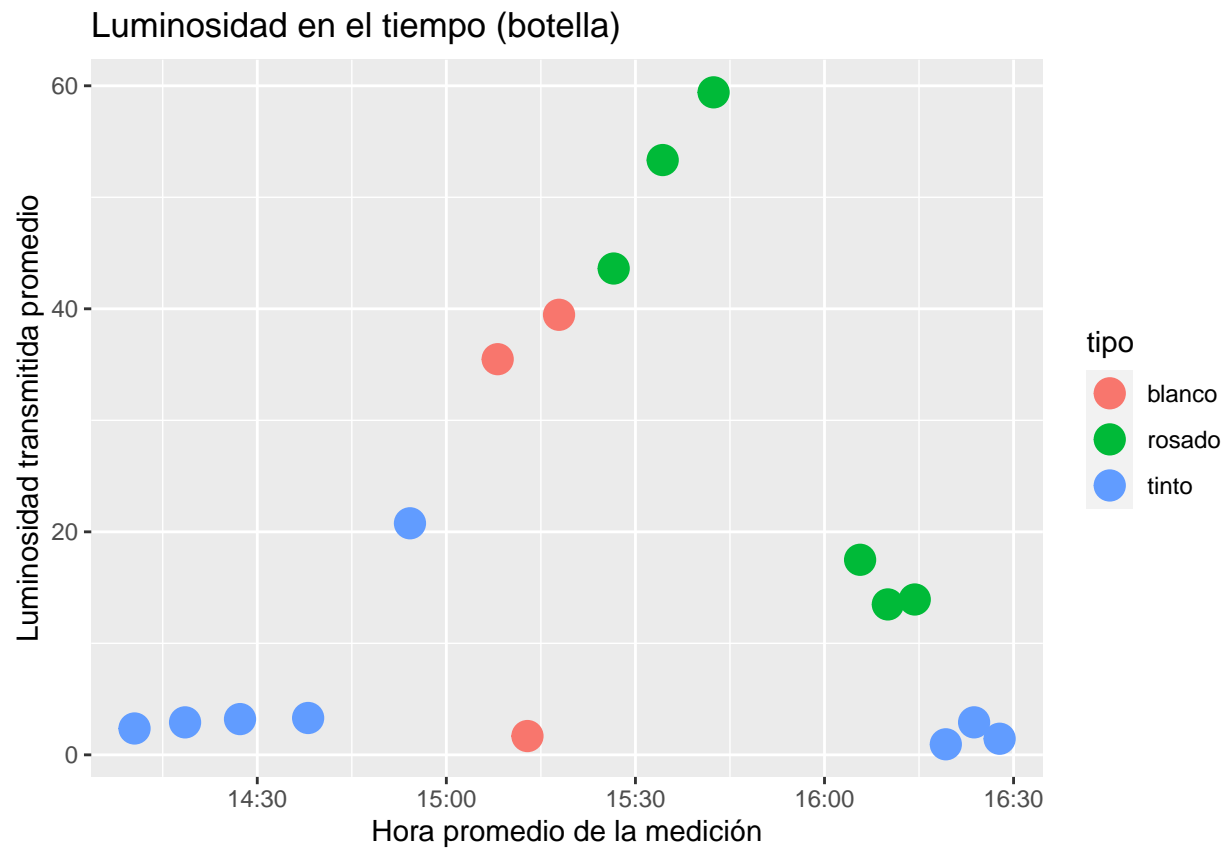
```
ab %>%
  filter(tipo=="tinto") %>%
  ggplot(aes(tiempo_botella_prom,luz_trans_vino_botella_prom-luz_trans_botella,col=replica))+
  geom_point()
```



```
aux5<-ab %>%
  group_by(tipo, cepa, año) %>%
  summarise(l_vbp=mean(luz_trans_vino_botella_prom), t_vbp=mean(tiempo_botella_prom)
            ,l_b=mean(luz_trans_botella),t_bp=mean(tiempo_vino_prom))
```

'summarise()' has grouped output by 'tipo', 'cepa'. You can override using the
'.groups' argument.

```
aux5 %>%
  ggplot(aes(t_vbp,l_vbp,col=tipo))+
  geom_point(size=5)+
  ggtitle("Luminosidad en el tiempo (botella)") + ylab("Luminosidad transmitida promedio") +xlab("Hora p
```



```
aux5 %>%
  ggplot(aes(t_bp,l_b,col=tipo))+
  geom_point(size=5)+
  ggtitle("Luminosidad en el tiempo (Vino)") + ylab("Luminosidad transmitida promedio") +xlab("Hora promedio de la medición")
```

