

EJEMPLO MODELO LOGISTICO y PROBIT

```
> beetle.data
```

	dose	numberinsects	numberkilled	props
1	1.6907	59	6	0.1016949
2	1.7242	60	13	0.2166667
3	1.7552	62	18	0.2903226
4	1.7842	56	28	0.5000000
5	1.8113	63	52	0.8253968
6	1.8369	59	53	0.8983051
7	1.8610	62	61	0.9838710
8	1.8839	60	60	1.0000000

```
> #logits como hay un cero en el denominador hay un infinito
```

```
> logitprops<-log(props/(1-props))
```

```
>
```

```
> #probits hay un infinito
```

```
> probitprops<-qnorm(props)
```

```
> cbind(logitprops,probitprops)
```

	logitprops	probitprops
[1,]	-2.1785324	-1.2719530
[2,]	-1.2851982	-0.7835004
[3,]	-0.8938179	-0.5524426
[4,]	0.0000000	0.0000000
[5,]	1.5533484	0.9361298
[6,]	2.1785324	1.2719530
[7,]	4.1108739	2.1411981
[8,]	Inf	Inf

```
> modelo1<- glm(props~dose,family=binomial(link = "logit"),weights=numberinsects)
```

```
> summary(modelo1)
```

Call:

```
glm(formula = props ~ dose, family = binomial(link = "logit"),
     weights = numberinsects)
```

Deviance Residuals:

Min	1Q	Median	3Q	Max
-1.5941	-0.3944	0.8329	1.2592	1.5940

Coefficients:

	Estimate	Std. Error	z value	Pr(> z)
(Intercept)	-60.717	5.181	-11.72	<2e-16 ***
dose	34.270	2.912	11.77	<2e-16 ***

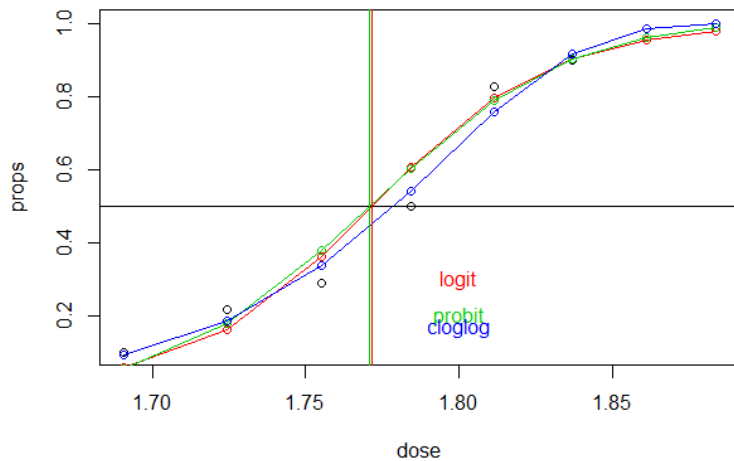
```
---
```

Signif. codes: 0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1

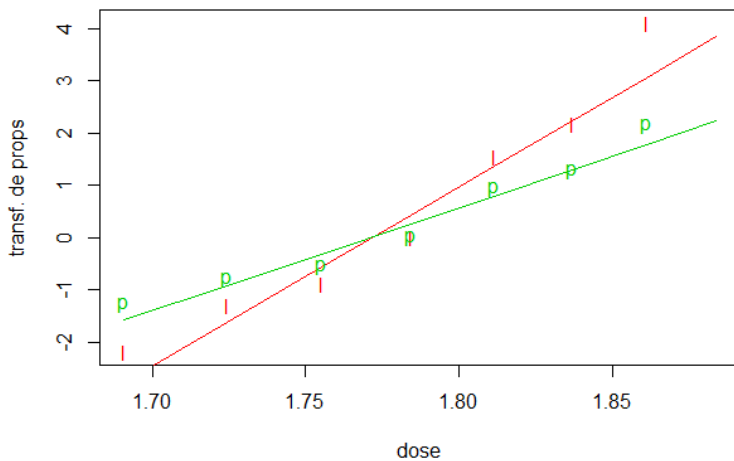
(Dispersion parameter for binomial family taken to be 1)

Null deviance: 284.202 on 7 degrees of freedom
 Residual deviance: 11.232 on 6 degrees of freedom
 AIC: 41.43

Number of Fisher Scoring iterations: 4



Dose vs tranf. de props



```
> summary(modelo2)
```

```
Call:
glm(formula = props ~ dose, family = binomial(link = "probit"),
     weights = numberinsects)
```

```
Deviance Residuals:
    Min       1Q   Median       3Q      Max
-1.5714 -0.4703  0.7501  1.0632  1.3449
```

```
Coefficients:
            Estimate Std. Error z value Pr(>|z|)
(Intercept)  -34.935     2.648  -13.19  <2e-16 ***
dose           19.728     1.487   13.27  <2e-16 ***
---
Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
```

```
(Dispersion parameter for binomial family taken to be 1)
```

```
Null deviance: 284.20 on 7 degrees of freedom
Residual deviance: 10.12 on 6 degrees of freedom
AIC: 40.318
```

```
Number of Fisher Scoring iterations: 4
```