

#### Preferred CRO in the EU North Zone within field research and regulatory consulting

Independent Regulatory Consulting & Field Research





#### Dose – response with log-logistck curves

• One of the most common curves is the symmetric log-logistic model:

$$y = c + \frac{d - c}{1 + \exp(b(\log(x) - \log(ED50)))}$$

• y is the response, c denotes the lower limit of the response when the dose x approaches infinity; d is the upper limit when the dose x approaches 0. b denotes the slope around the point of inflection, which is the ED50, i.e. the dose required to reduce the response half-way between the upper and lower limit.

### Dose-response with Log-logistick curves





### Dose-response in trials with logarithmic application







# Seed treatment insects in oil seed rape





# Segmentation – removing the soil





# Digital assessment of crop cover VS visual assessment of biomass



Plant cover in % by Drone

Visual biomass in field assessment



#### Plant count and cover with drones









# FieldImageR – a package for R to extract information from pictures

- <u>https://github.com/OpenDroneMap/FIELDimageR</u>
- <u>https://github.com/filipematias23/FIELDimageR.Extra</u>
- <u>https://www.opendronemap.org/webodm/</u>
- DRC package for log-logistick kurves
- <u>https://cran.r-project.org/web/packages/drc/index.html</u>
- <u>https://rstats4ag.org/dose-response-curves.html</u>
- <u>https://cran.r-project.org/web/packages/drc/drc.pdf</u>