Estimating biophysical and geometrical parameters of grapevine canopies ('Sangiovese') by an unmanned aerial vehicle (UAV) and VIS-NIR cameras

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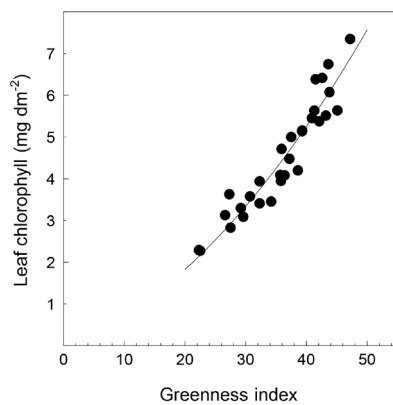

Fig. 1: The relationship between leaf chlorophyll content and Greenness index in grapevine leaves ('Sangiovese') sampled at DOY 197. Each symbol represents one leaf. Regression equation: $y = 0.002 \, x^2 + 0.051 \, x$; $R^2 = 0.90$.
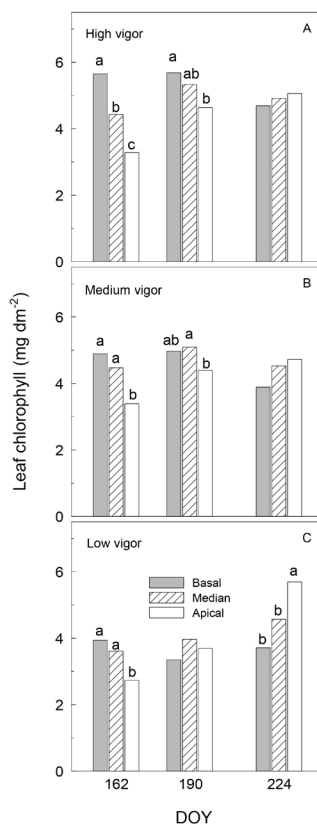

Fig. 2: Chlorophyll concentration of leaves inserted on the basal, median and apical zone of the shoot in high, medium and low vigour grapevines ('Sangiovese'). Histograms are means of five leaves (three measurements per leaf) for each group. Different letters indicate significant differences between the three leaf shoot positions within each class of vigour.
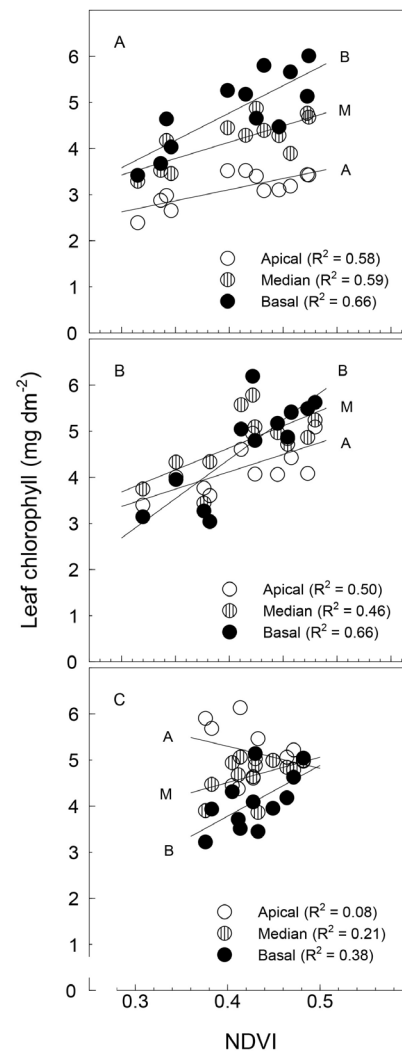

Fig. 3: The relationship between NDVI (whole-canopy) and leaf chlorophyll of leaves inserted on the basal, median and apical zone of the shoot in high, medium and low vigour grapevines ('Sangiovese') at DOY 162 (**A**), 190 (**B**) and 224 (**C**). Symbols are means of five leaves (three measurements per leaf) for each replicate.