

## **LIFE + BIODIVINE – Plant protocol 2012**

**Purpose of the study:** To characterize the herbaceous strata of the 25 plots monitored with arthropods and birds' survey.

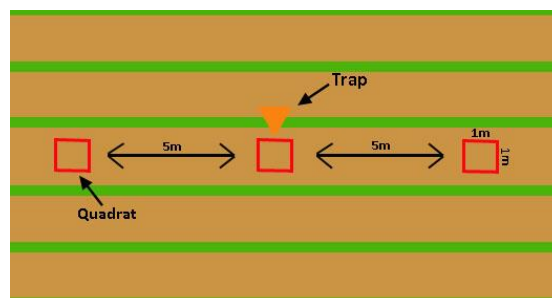
Species were identified using floras (see Bibliography) and botanist experts' experience.

### **Objectives:**

- Description and characterization of botanic communities (evaluation of the botanic richness and diversity of the 25 vineyard plots of each site)
- Establish the relationship between botanic diversity and:
  - o Arthropods' diversity
  - o Landscape variables

### **Methodology:**

- Relevés in the 25 plots that are also monitored for arthropods and birds surveys;
- One single person for the 25 botanic relevés on each site.
- 3 replicates per plot, on the inter-row, next to the arthropods trap.
- Each replicate = 1m<sup>2</sup> quadrat
- Replicates location:
  - o One replicate next to the arthropods trap in the center of the inter-row
  - o Two replicates on each side of the 1<sup>st</sup> one, distant from 5m.



**Botanical quadrats' location in the vineyard plot**

### **Additional information to take into account:**

Several information regarding the local conditions are important to note, such as:

- Date
- Ground cover: full, inter-row, 1 inter-row out of 2, out of 4 ...
- Ground cover : natural or sowed
- Tillage or chemical weeding

- Recent mowing
- Type of soil: normal, clay, rocky ...
- Slope
- Any additional information that you judge useful to consider in the botanical survey.

### **Considered data:**

- Cover rate for the whole plot
- Cover rate per 1m<sup>2</sup> quadrat
- Species composition: Presence-Absence index
- Abundance using the Braun-Blanquet Abundance-Dominance scale:
  - +: rare
  - 1: <0.05 m<sup>2</sup>
  - 2: 0.05-0.25 m<sup>2</sup>
  - 3: 0.25-0.50 m<sup>2</sup>
  - 4: 0.50-0.75 m<sup>2</sup>
  - 5: >0.75 m<sup>2</sup>

*NB: The Sociability scale isn't considered in this study*

Calculated indexes:

- Total cover
- Species richness
- Species diversity (Shannon index + Equitability index)

### **Bibliography:**

Floras:

- BLAMEY M. et GREY-WILSON C, *Toutes les fleurs de méditerranées*, Delachaux et Nieslé, 2009.
- FITTER R., FITTER A et BLAMEY M, *Guide des fleurs sauvages*, Delachaux et Nieslé, 2011.
- FITTER R., FITTER A et FARRER A, *Guide des carex, joncs et fougères*, Delachaux et Nieslé, 2009.
- HAFLIGER E., SCHOLZ H, *Grass weeds 1 et 2*, Documenta CIBA-GEIGY, 1980/1981.
- JAUZIEN P, *Flore des champs cultivés*, SOPRA/INRA édition, 1995.
- MARMAROT J., *Mauvaises herbes des cultures*, ACTA, 2002.

Virtual encyclopedia/CD-Rom:

- COLUMA Vigne (Comité de lutte contre les mauvaises herbes, La flore des vignobles de France,
- DU PONT DE NEMOUR, *Les principales adventices*,

Internet links

- <http://www.flora-on.pt>
- <http://crdp.ac-besancon.fr/flore>
- [http://aguiar.hvr.utad.pt/pt/herbario/cons\\_reg.asp](http://aguiar.hvr.utad.pt/pt/herbario/cons_reg.asp)

