

VITEN SAS di Albino Morando & C.

Evaluation the efficacy of ELICITORS against Flavescence dorée (16SrV) in Vitis vinifera cv. Barbera and Pinot Noir

Protocol ID: 2018 PHYP64 CNR 1 Location: Calosso Trial Year: 2018
 Trial ID: By: ALBINO MORANDO
 Project ID: Study Director: Simone Lavezzaro

Trt No.	Treatment Name	Form Conc	Form Unit	Form Type	Rate Rate	Rate Unit	Appl Code
1	Untreated Check						
2	Product 1						

Replications: 4, Untreated treatments: 1, Conduct under GLP/GEP: Yes (GEP with no protection), Design: Randomised Complete Block (RCB), Treatment units: Treated 'Plot' experimental unit size, Dry Form. Unit: %, Treated 'Plot' experimental unit size Width: 4 meters, Treated 'Plot' experimental unit size Length: 6 meters, Application volume: 200 L/ha, Mix size: 1.92 litres, Format definitions: G-All7.def, G-All7.frm

Trial Establishment Guidelines

Treated Plot Width:	0,3 m	Site Type:	VINEYA O vineyard
Treated Plot Length:	1 m	Country:	ITA Italy
Treated Plot Area:	0,3 m2	Climate Zone:	EPOMED EPPO Mediterranean
Replications:	4	Experimental Unit:	1 PLOT plot
		Tillage Type:	CONTIL conventional-till
		Study Design:	RACOB L Randomized Complete Block (RCB)

Responsible

Simone Lavezzaro

Total Trials: 4**Conduct Under GEP:** Yes **Officially Recognized Organization:** Vit.En.**No. Guideline Description**

1. PP 1/181(4) Conduct and reporting of efficacy evaluation trials including GEP
2. PP 1/152(4) Design and analysis of efficacy evaluation trials
3. PP 1/135(4) phytotoxicity assessment
4. CEB MG14 Principes gén. d'expérimentation stimulateurs des défenses des plantes (SDP)

Objectives:

- 1 - To evaluate efficacy of Product 1 against Flavescence dorée in grapevine.
- 2 - To evaluate any possibility of recovery after infection

Crop Description

Crop 1:	VITVI	Vitis vinifera	Grapevine
Variety:		Barbera / Pinot Noir	Description: seedlings
BBCH Scale:		BGRA	
Planting Rate, Unit:		3500 P/ha	Row Spacing, Unit: 4 m

Target Pest Description**Pest 1 Type:** D **Code:** PHYP64Grapevine Flavescence dorée**Common Name:** Flavescence dorée of grapevine**Establishment Date:** 1/5/2018**Vineyard planting**

The following operations will be made in order to obtain the utmost root-taking in the experimental vineyard:

- Ground leveling
- Trenching (made by excavator)
- Fertilization
- Field tracing
- Purchase and planting of the rooted cuttings
- Purchase and positioning of the support structures

Vineyard management

- Weed control
- Winter pruning
- Green pruning
- Pest control
- Vineyard health's control
- Monitoring of Scaphoideus titanus
 - monitoring of the juvenile forms by counting of the mobile forms per leaf on a representative sample
 - monitoring of the adults by positioning of appropriate chromotactic traps

Application Directions:

Assessments made at each application

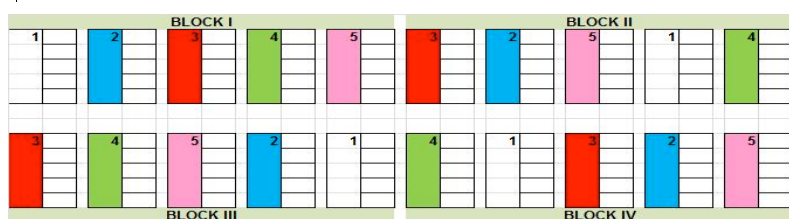
- rainfalls
- soil and air temperature
- wind speed
- relative humidity
- cloud presence
- leaf wetness
- phenologic stage
- **The characteristics of the plants will be specified for each application:** height of the canopy, LAI, etc...
- **Application timing**
- ABCDEFG: leaf applications; spray volume: 1.000 L/ha. The beginning of the applications will be approximately at BBCH 13-14. Interval 10-12 days. End of application BBCH 85-89 approximately.
- X: application on the ground during the planting of the rooted cuttings
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Geographic Area/Environmental Considerations:

The experimental vineyards will be chosen in areas with high incidence of FD (Calosso, Castiglione Tinella).

The experimental plots consist of 20 rooted cuttings per thesis. Each thesis has 4 plots, each one with 5 plants organized inside the vineyard according to the system of randomized blocks (fig. 1).

Fig. 1. Example of plots organization inside the experimental field



Data to Collect:

Phenologic stage

- The BBCH code will be specified for each application and assessment.

- The numeric results will be completed by appropriate iconographic material.

Meteorological data

- detailed weather reports will be made during the whole experimental period: hourly and daily temperatures, rainfalls, soil and air humidity, wind.

Assessments - efficacy

The efficacy of each product will be measured in terms of quantity of affected plants at the end of the agronomic season. Three controls will be made (middle of June, middle of July and middle of August) in each vineyard and the affected plants with at least three specific symptoms of FD will be specified.

Assessments - selectivity

The possible phytotoxicity on the plant due to the tested products will be evaluated. Vigor, necrosis, color changes will be considered accurately. Any anomalous symptom will be photographed in support of the analytic evaluations.

Assessments- Non target organisms

- each effect (positive or negative) on other diseases will be reported.
- each effect (positive or negative) on pollinating insects or useful entomofauna will be reported.
- each effect (positive or negative) on the next crops will be reported.

Statistical Analysis:

The data will be worked out through the variance statistical analysis and compared with the Duncan test, with a significance level of 0.5%

General Comments:

Time schedule

Beginning of the field trial: May 2018

End of the field trial: November 2020

Every year a complete report of the trial progress will be made. After the first assessment (in the month of July) a first report with the partial results will be delivered. At the end of the season, in the month of October, the final report will be delivered.

Archiving

The protocol, raw data and a copy of the final report are lodged in the record office of VitEn s.a.s., Via Bionzo 13 Calosso (AT) 12051 - Italy.

Reporting

The study will be reported using the VitEn standard form:

One paper copy of the final report and a Project Summary Disc (containing the study data and the report in Excel format and PDF format along with any other relevant study information)